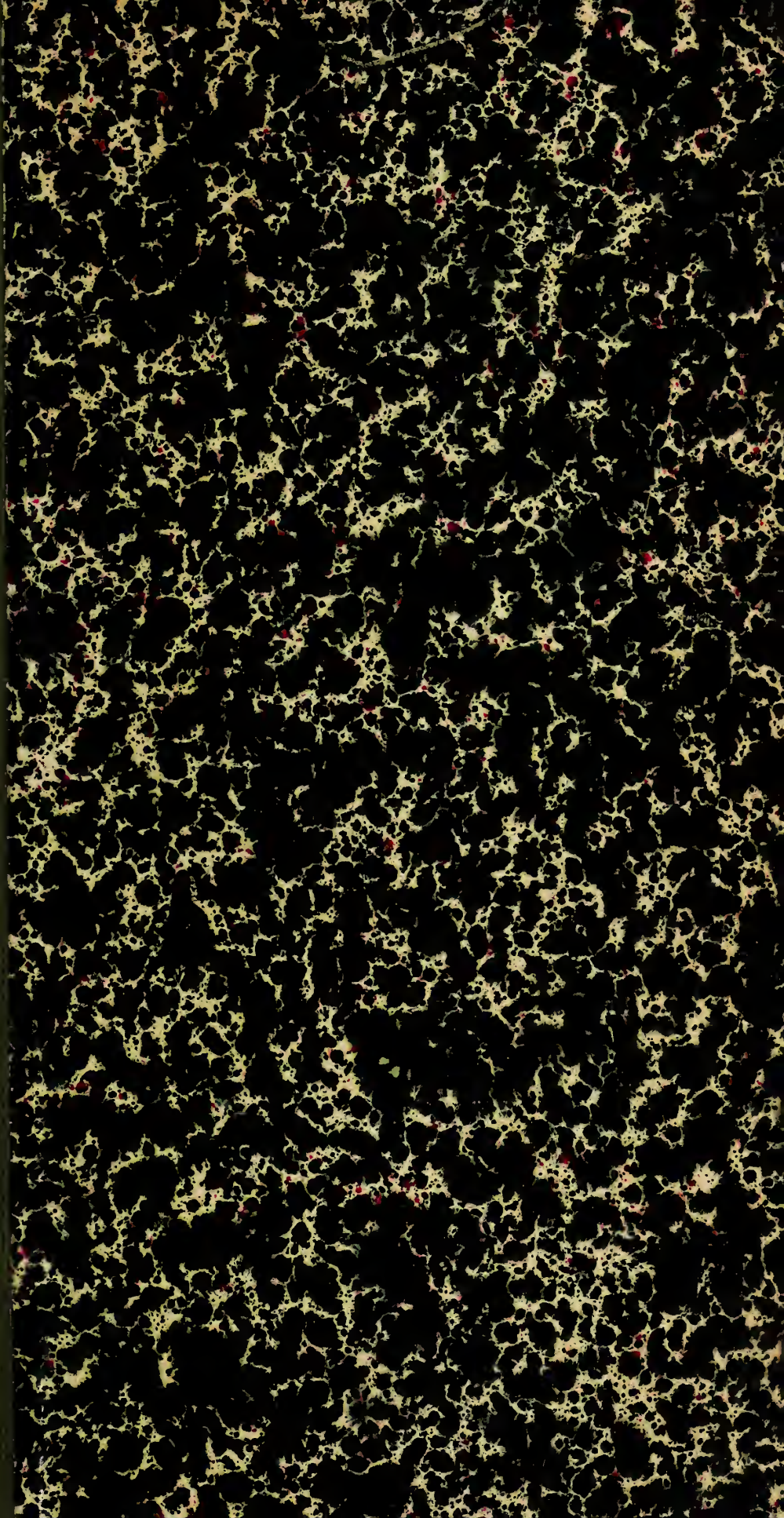


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OF THE

Missouri State Medical Association

The Official Organ of the State Association and Component Societies

Issued Monthly Under Direction of the Publication Committee

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ORIGINAL ARTICLES

REFLECTIONS OF AN INTERNIST ON THE THYROID PROBLEM*

C. H. NEILSON, M.D.
ST. LOUIS

There is hardly any medical journal that we can pick up these days but discusses in some manner the problem of the thyroid. All of us know that we have the goiter and goiter manifestations always with us. A number of reflections have occurred to me in my experience with the thyroid that may perhaps be interesting, to you at least, if not educative. It may recall some things to your mind, as our experiences must be about the same.

The first thing I wish to speak about is the diagnosis of thyroid troubles. For the sake of convenience, we will simply mention the fact we have simple thyroids and toxic thyroids, the toxic thyroid being the well known toxic adenoma and exophthalmic goiter.

Certainly, with exophthalmic goiter, the diagnosis presents no great difficulty to a man who is "on his toes," so to speak. We have all the cardinal signs in some cases, and sometimes we have only a few, yet sufficient to make the diagnosis of exophthalmic goiter.

There are certain things in exophthalmic goiter which we must know. We must know these cardinal signs and we must know the variations. There are certain differences in exophthalmic goiter and toxic adenoma.

We have one difference in exophthalmic goiter I wish to mention, namely, the bruit in the thyroid gland itself, and a peculiarity in the blood pressure. The blood pressure is not unlike that of aortic insufficiency where we have difficulty in getting at the diastolic pressure. Consequently, we are apt to have in a classical case of exophthalmic goiter so called capillary pulse. This is a difference between exophthalmic goiter and toxic adenoma. We do not have that peculiar blood pressure in toxic adenoma.

We do not have a bruit in the gland in toxic adenoma. Toxic adenoma is another problem and probably entirely different from exophthalmic goiter.

How do we make the diagnosis of a toxic adenoma? It is a little more easy in exophthalmic goiter and a little more difficult in toxic adenoma or in adenoma in general. As you know, we have a toxic and a nontoxic adenoma which may become toxic.

The history of these individuals is quite important. If we take the history of the individual, we will often find that a patient knew he had an enlargement of the thyroid, or goiter, many years before. He comes to you and you examine him and find signs of toxicity. I think it is Dr. Mayo who says that from the time the individual knew of the goiter to signs of activity the average is 17.7 years. We find more toxic adenomas in middle life but few in early life. This is another difference between a toxic adenoma and an exophthalmic goiter.

Toxic adenoma does not have the train of symptoms which an exophthalmic goiter has. It has more inconstant symptoms. They may be masked or concealed. This patient may have given the history of having nervous breakdowns, being a little different from other people—nervous instability—could not stand the strain of life very well. They have tremors and cardiac manifestations of a peculiar type—the extra beat, and various arrhythmias. We may have that, of course, in exophthalmic goiter. Paroxysmal attacks of arrhythmias may spring up at any time.

Adenoma is often confused with nervous conditions and has been diagnosed repeatedly as such. Over and over again it has been called a neurasthenia. There is a nervous element in these people; and in the case of a small adenoma, one must be careful or he will overlook it.

We come to the simple or so called adolescent goiter. I am not speaking of this because of its toxicity, but because of certain things I wish to say about it. The adolescent goiter which appears post-adolescent—that swelling of the thyroid which is in some way connected with the female function, par-

*Stenographic report of extemporaneous talk in the Symposium on Goiter, 68th Annual Meeting, Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

ticularly, and which we have in a great many young women. In certain districts where we have supposedly an iodine insufficiency, 13 per cent. of the women have adolescent goiter. It is being treated and treated and operated upon, perhaps unwarrantedly, because of a certain train of symptoms these individuals may have, symptoms which make one think we have a toxic thyroid or a nervous condition brought on by the thyroid.

The first thing I wish to call to your attention is the subject of incipient tuberculosis in young people. Ten years ago I read a paper before the St. Louis Medical Society in which I tried to make a differential diagnosis between early tuberculosis and certain goiter conditions. Last winter, Dr. Crile, of Cleveland, gave a similar paper on the same subject. Low degrees of fever, irritable circulation, rapid hearts, nervous symptoms, etc., go with these cases of early tuberculosis; so much so that when any physician gets a patient who is a so called neurotic, he certainly should study that patient carefully for some sign of tuberculosis somewhere, as most cases of tuberculosis are more or less neurotic or nervous.

The second thing is this term, "neurocirculatory asthenia," whatever that may be.

We have in the body two great nervous systems, the cerebrospinal system, and the sympathetic system, the latter having to do with involuntary motion. The sympathetic nervous system has to do with our viscera. We might call the whole sympathetic nervous system the autonomic system. It is divided into the thoracolumbar type, or the old vegetative nervous system, and the lumbosacral sympathetic to which belongs the craniobulbar division. This you might call the extended vagus, and the two are called the parasympathetic. Stimulation of this latter division will slow the heart. Stimulation of this will produce high degrees of peristalsis. Stimulation of this will produce spastic colon.

The other type produces the opposite conditions. It speeds up the heart, as the irritable heart of the soldier. This type is physiologically opposite from that of the thoracolumbar type. A lot of young people have this irritable sympathetic nervous system which manifests itself by tachycardia. We get a circulatory reflex around the neck, cold hands, tremors and nervous excitement. These are typical symptoms that go with the toxic goiter. The physician concludes, "I have a toxic adolescent goiter," when perhaps it is not. It is true both in men and women. You know how often we found those cases in the army. The action of the hormone in the thyroid gland is on the sympathetic nervous system. Perhaps the action of other endocrine substances is on the sym-

thetic nervous system. So that we have tuberculosis and neurocirculatory asthenia, which must not be confounded with the adolescent goiter.

Focal infection and its relation to stirring up the thyroid is to be considered. In a certain number of cases it does this. I wish to warn you that the adolescent thyroid, which is usually nontoxic, should not be confused with the things I have mentioned.

We have been talking about diagnosis. It rests on pathology. Pathological changes rest upon a disturbed physiology. What is the function of the thyroid gland? What is its physiology? Marine says it has to do with the regulation of oxygen. In the thyroid cases we must have the oxygen poured at a higher level. Various changes in the human body have taken more or less oxygen. We might call the thyroid secretion the chemical regulator of the body, or of oxygen. With the manifold chemical changes taking place in the body we are bound to have great disturbances.

We have an iodized protein compound in the thyroid. The physiology of the thyroid gland has something to do with iodine. Back, years ago the old doctor or priest or man in town would feed his thyroid patient the ash of seaweed, and get results. From that time on down, we have been discussing iodine and its relation to goiter. Just what relation it has we do not know. We can assume that it is for the purpose of producing thyroid secretion. That is a part of it. Is it all? No one as yet knows. Iodine and iodine deficiencies are probably responsible for most of the hyperplasias and hypertrophies of the thyroid gland, accompanied by other disturbing influences such as focal infection, which stir up the thyroid gland.

It is found that exophthalmic goiter will develop after a severe mental strain, so there is an indication other than iodine. Those of you who keep pace with literature know the great value we have in iodine prophylaxis, the plan of giving iodine in small doses over two periods a year to school girls, with a result that is striking. Read it up, those who do not use it, and protect your young adolescent girls who ought to be using it.

The second thing is the use of iodine as a prophylaxis in pregnant mothers and its value in cretinous children. We can prophesy if this is kept up for a generation that we will greatly reduce the number of goiters in this country.

We come to another problem of iodine, iodine deficiency, and this brings us to exophthalmic goiter again. We take up the work of Plummer. We have a gland supposedly over-functioning with an excess of thyroxin, which is an iodine compound. In spite of that,

Plummer advocates the use of iodine. It is paradoxical, to say the least. We must say that as yet the iodine question is not settled. Is there an iodine deficiency that stirred up that gland? If so, how can we account for the symptoms we produced?

I am not so sure we do not have other iodine compounds in the body. I am not so sure that thyroxin may not be produced elsewhere in the body. We know insulin is found in the salivary glands and other glands in small proportion, not alone in the pancreatic gland. This is just a theory. I am not sure but what iodine is mobilized in some other organ or in combination. Just how it acts in exophthalmic goiter no one knows. It does work, that is the beauty of it. Quinine worked long before we found the malarial parasite. Mercury worked before we found the spirochete. I am not so brave as some internists who say it will work in all cases of exophthalmic goiter. It works in some beautifully; in others, partially; in some, not at all.

Iodine works in some of these cases. It results in this: The use of iodine in exophthalmic goiter is more or less doing away with ligations. It helps us to put these patients to bed and keep them quiet. In some cases it is partially curing them. These toxic thyroids are nothing more nor less than a self limited disease and will run their course and cure themselves; but in so doing they may damage many organs.

The thing I wish to speak of in connection with the use of iodine and the diagnosis of the thyroid gland is this: The diagnosis of the toxic thyroid is not difficult. The use of iodine in many cases is not difficult. The difficulty is in telling when to use iodine and how much that patient has been damaged. This is the difficulty in diagnosis. There is where a lot of us fall down; at least, I have. We know the point of attack is first on the heart. The high blood pressure, the effect on the nervous system and visceral organs, that is what I wish to emphasize at this time, because it has something to do with the subsequent treatment of the case.

First find out whether or not your patient has been damaged beyond repair, just as you would find out whether a carcinoma has metastasized before you attempt to do anything. Find how far along you are in the course of the disease.

The question of treatment arises. You have thyroids, toxic thyroids. What will you do with them? I would like some help this afternoon. I wrote to fifteen prominent doctors in St. Louis, many internists, and a few surgeons. I got back reports from every one

of them, and every one was different. There was very little similarity in their reports, and I think they gave a true story of what they believed.

Some internists said they did not believe in operations. Some surgeons said the same. One man said, "I do not know much about iodine. It is an unsettled question; therefore, I do not use it." I think that is foolish. There is a thing about iodine I wish to mention. Doctors are like sheep, they will follow a leader. Plummer comes out with the use of iodine, and many physicians, every time an individual has a thyroid, dose him with iodine. It is all right in exophthalmic goiter. It does not work in all adolescent goiters and it does positive damage in the toxic adenoma and in nontoxic adenoma, often transforming the latter into a toxic. I warn against the use of iodine indiscriminately and in large doses. Some think if a little is good, more is better. Make your diagnosis, if possible.

What shall we do with these thyroids? Let us take the exophthalmic goiter first. Shall we operate, X-ray, put them to bed, or give sedatives? We will do all three. First, we will put them to bed. I wish to speak a warning against putting the exophthalmic goiters to bed. First, it is done to spare the heart; second, to quiet their nervous system, if possible. Now, what happens? The doctor sees his patient and says, "You must go to the hospital right away. We may have to operate on you." He puts him in the hospital without a nurse. Puts him to bed, and feeds him. They often pound themselves to death, like a wild bird in a cage. I warn you on that proposition.

Before I put a patient to bed, I stop and talk this over with the patient and the family. I am not afraid to mention operation to my thyroid cases; in fact, I mention it so that they can think of the word without getting scared to death. I talk X-ray treatment and try to tell them what is happening and why we put them to bed. I tell them there is no use going to the hospital unless they will cooperate. I think a lot of exophthalmic goiters are better off at home, if controlled. I think they are better off in the hospital if you have nurses and a companion who can occupy their mind. I think they are better up part of the time if you help take care of the heart by digitalis. Many patients put to bed and given Lugol's solution quiet down. We give them sedatives. We give digitalis. We X-ray. We operate. What happens? Some of them get well and some do not.

Exophthalmic goiter is a little different pathologically from toxic adenoma. Warthin and Thompson have spoken for years on the question of the lymphoid structures in the ex-

ophthalmic goiter type. We have something like status lymphaticus. They belong to that type of individual. I think there is a residue left and after operating this type shows the least improvement because of this residue.

Now the question arises as to the preliminary treatment of the toxic adenoma. I think the great thing is the doctor himself. In his wisdom and certainty and knowledge in the control of that patient when he attempts to put him to bed lies a great part of the solution of the problem. I think we miss it. These patients demand attention and must have it. You cannot neglect them.

We come to the treatment of toxic adenomas. What are we going to do with them? Preliminary treatment is ineffectual in nearly all of those cases. Iodine is ineffectual; rest is ineffectual; so are digitalis and sedatives. There is one thing I know to do and that is to operate and I am an internist.

I think adolescent goiter should be let alone if we can. So the treatment resolves itself into this: The adolescent goiter we let alone, and the toxic adenomas we operate.

Don't promise in any toxic thyroid that you will get complete relief. You will in a large number of cases. You will get partial relief in most of those cases. There is a residue left of something even after operation. The sympathetic nervous system gets on edge and stays on edge in a lot of these people. Do not promise complete recovery but hope for it.

We have come to the exophthalmic goiter. We put them to bed; give sedatives, X-ray them, and operate. I will make this statement this afternoon. In the light of our present knowledge of the thyroid gland, its physiology, pathology, and clinical symptoms, in our modern treatment we get the most permanent cures by surgery. Some get well of themselves. Next, perhaps, with the X-ray or a combination of X-ray and bed rest.

I heard a surgeon brag about getting his thyroid patients out of the hospital in six days and letting them go back to work. I think any toxic thyroid that has been operated upon should have from three to six months post-operative care before he is allowed to go back to his ordinary occupation, at least in full blast. A case in mind is a young man in St. Louis. Six months afterward he was playing soccer foot-ball on one of the big teams, but it took six months to do it. I had to talk to that boy and treat him and assure him he was all right, and he settled down. Don't be in a hurry about putting your people back to work.

Humboldt Building.

SURGICAL MANAGEMENT OF THE GOITER PATIENT*

H. S. MCKAY, M.D.
ST. LOUIS

The reduction in the mortality following operations on the thyroid gland in the last ten years has been most striking. The cause for this improvement in mortality has not been due to the selection of better risks for surgery or the refusal of operation to a greater number of serious cases, but to the better co-operation between internists and surgeons, in careful classification of cases, improved pre-operative treatment by the internist and surgeon, the selection of the proper type of operation suitable to the individual case, the use of local or gas-oxygen anesthesia, and finally, improvement in the care following operation. There should be no argument whatever between internist and surgeon concerning the treatment of goiter. There can be no question but that some cases of goiter are cured by careful medical handling. It would seem when one studies the end results of the surgical treatment of exophthalmic and adenomatous goiter, in comparison with all other methods, one must necessarily conclude that surgery offers the best chance of complete restoration to health in the greater number of cases.

For the purposes of the surgeon, Plummer's classification of goiter is very satisfactory: (1) Colloid, or simple goiter. (2) Adenoma without hyperthyroidism. (3) Adenoma with hyperthyroidism. (4) Exophthalmic goiter. (5) Cretinism. (6) Myxedema. (7) Thyroiditis. (8) Malignancy. (9) Anomalies. Since more than ninety per cent. of all goiters fall into the first four classes, the last five will not be considered in this discussion. Colloid, or simple goiter, rarely calls for surgical treatment and can also be omitted.

Adenomata without hyperthyroidism usually require only the removal of the adenomatous portions of the gland. Some clinicians doubt the need for this procedure. It seems to me, however, that no one can foretell when a case of adenomatous thyroid without hyperthyroidism may develop into a highly toxic state, giving rise to serious and dangerous symptoms. For this reason, we are beginning to feel about this condition much as we do about a chronically diseased appendix—better out than in. Certainly cases of this class, that is adenoma without hyperthyroidism, present no serious problem in their handling when they do come to operation.

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

Adenoma with hyperthyroidism, on the other hand, presents to the surgeon in many instances very trying problems. The development of this type of disease is usually over a rather long course of time. The hyperthyroidism develops so insidiously that the patient is not aware of his condition until very great damage may be done to the kidneys, heart and other vital organs. In many instances the patient is in a crisis before he realizes that he is ill. The management of such cases, once the condition is recognized, presents a great many difficulties. In fact, it has been our experience that the severely toxic adenomata showing very rapid pulse, high basal metabolic rate, restlessness, loss of weight and degeneration of heart and kidney, show little or no response to preliminary treatment or multiple stage operations. In the main, they are benefited only by the removal of the adenomatous gland. Absolute rest in bed under perfectly quiet surroundings; morphine, luminol for restless and sleeplessness; digitalis to pull up the failing heart; plenty of proper food and fluids over a period of days, will frequently put the patient in a much safer condition for operation.

Preliminary ligation of one or more thyroid arteries seems to have no effect whatever upon this type of patient. It has been my misfortune to have one case of toxic adenoma die within forty-eight hours after a simple ligation of the right superior thyroid artery under local anesthesia, which required not more than five minutes in its completion. This case was considered by both the internist and the writer as a fairly safe risk for thyroidectomy. A very acute, explosive outburst of symptoms developed, the patient becoming delirious and despite very energetic after-treatment, nothing produced any amelioration whatever of symptoms, and as stated, she was dead within forty-eight hours. Since this time we have considered it useless to do preliminary ligations on toxic adenoma cases. Careful judgment with respect to the amount of surgery such cases will stand is absolutely essential. We feel, in the main, that such a case is a very serious risk, but nothing short of the removal of the diseased portion of the gland will result in the cure of the patient and the risk must be assumed by the surgeon. It is our practice to do the operation upon these patients under local combined with light nitrous oxide anesthesia. In certain cases in which the patient is apparently not doing well during operation we follow the advice of Crile, Bartlett and others, and only partially close the wound in order to save all the time possible on the operating table and return the patient to bed

at the earliest moment. With careful pre-operative management and good judgment in the amount of surgery at a given time, the mortality in this class of cases will not be unduly high.

The group comprising exophthalmic goiters is one requiring the greatest judgment upon the part of both internist and surgeon. In our experience the mortality, while unusually small considering the severity of symptoms, is dependent almost entirely upon degenerative changes in heart, kidneys, liver and muscles. Long continued hyperthyroidism has resulted in such destructive changes in these organs that even successful removal of the gland does not always result in permanent cures and occasionally in no improvement. Yet in some cases in which rather marked degenerative processes are found, striking results may follow operation. The early, simple type of exophthalmic goiter with a moderately low basal metabolic rate, a fairly rapid pulse, with the symptoms of nervousness, excitability and fatigue, ordinarily present no great problems in their surgical management. A few days preliminary treatment consisting chiefly of sleep and rest is ordinarily all that is required to make safe risks for thyroidectomy. The severe cases presenting long standing symptoms of hyperthyroidism in which the above mentioned degenerative changes have taken place in heart, liver, kidneys and muscles, tax one's judgment to the limit at times in bringing these cases safely through operation. The following case is fairly illustrative of this type:

REPORT OF CASE

Mrs. L. was admitted May 25, 1924, to St. Anthony's Hospital in the service of Dr. J. C. Lyter, in conjunction with whom the writer studied and took care of the case. The patient had been given two or three months' X-ray treatment without any apparent benefit. An enlargement of the thyroid gland had been noticed by the patient about twelve years previously. About five years before coming under our observation there developed a cardiac syndrome characterized by tachycardia at times, with noticeable irregularity. She had lost fifty pounds in the last six months, slept poorly, complained of night sweats, and at times fever, and intense nervousness described as a trembling sensation. There had been some edema of the ankles and at times diarrhea. There was marked bilateral exophthalmos and irregularity of pupils, reacting sluggishly to light. There was pronounced Stellwag's and moderate Moebius' and Von Graef's signs. The heart was enlarged. There was a systolic murmur at the apex and a soft murmur over the base. Heart rate 140 per minute. Blood examination revealed nothing unusual. Urinalysis revealed albumin, no sugar, diacetic acid or acetone; occasional pus cells, with frequent blood cells, but no casts. There was present an annoying cough though the lungs were normal both to physical examination and X-ray findings.

Patient was placed in bed for a period of five

or six days, plenty of fluids were given, with nourishing food. Sleep was induced by luminol, and Lugol's solution was administered. Her basal metabolic rate on entrance in the hospital was plus 103. During the time she was in bed the pulse came down to 100 within three days and remained about stationary until a preliminary ligation under local anesthesia was made of both superior thyroid vessels. The basal metabolic rate had dropped to plus 47. A very stormy course followed the ligation of the superior thyroids and lasted for a period of six or seven days. The pulse rate increased, fluctuating between 130 and 160 during this time. She was delirious for the first three days. She was given Lugol's solution, ten drops four times a day, two or three thousand ccs. saline by hypodermoclysis was administered daily, glucose and sodium bicarbonate by proctoclysis was administered almost continuously. Morphine and luminol were administered to induce sleep and maintain as much rest as possible. She gradually recovered from this crisis and improved fairly rapidly.

She left the hospital at the end of three weeks, after which she gained steadily in weight and her general condition improved. Five months later she re-entered the hospital, having gained forty pounds in weight, reporting that she slept well, had a good appetite, and most of her nervousness had disappeared. Her basal metabolic rate at this time was plus 26. After a few days of preliminary treatment, she was subjected to thyroidectomy, approximately four-fifths of the gland having been removed under combination local and gas-oxygen anesthesia. No untoward symptoms followed this operation. Her convalescence was smooth and speedy. She left the hospital at the end of ten days and has steadily improved since that time.

The last operation was done in October, 1924. I saw this case a few days ago and the patient reported that she had resumed all of her duties as maid in a large family. She stated that she had no difficulties in doing her work, slept well, and had attained her normal weight.

The history of this case is cited because it covers pretty well the difficulties encountered in treating the more severe types of exophthalmic goiter; it illustrates the value of multiple stage operations and particularly shows the improvement following ligation of the superior thyroid vessels. Perhaps, as stated by others, the use of Lugol's solution in exophthalmic goiter may reduce the necessity for preliminary operations considerably; however, in our experience ligation of the thyroid vessels has uniformly been followed by marked improvement. In patients critically ill as a result of hyperthyroidism, a single ligation is first performed under local anesthesia, followed in a few days, provided the reaction has not been too severe, by a similar procedure on the opposite side. Such patients ordinarily are greatly improved, as is shown by the gain in weight, slowing of pulse rate and amelioration of the toxic symptoms in general. Usually a thyroidectomy can be performed in three to five months later. In many instances ligation of thyroid vessels gives the surgeon an opportunity of estimating the ability of the patient

to withstand later procedures. I believe it can be safely inferred that the above cited case would hardly have stood a primary thyroidectomy; the reaction to ligation was intense, yet the improvement permitted a perfectly safe excision of the gland a few months later.

In the evolution of the treatment of thyroid disease it is possible that surgery should be considered only a temporary measure, yet I think one must concede that at present it offers more to the unfortunate victim of this malady than any other means within our knowledge. Non-surgical procedures frequently cause a cessation of the activity of the thyroid with a temporary relief from symptoms. The great majority of cases so treated sooner or later relapse; by this time visceral degenerative changes have occurred and progressed to such a stage that operation is followed by only partial improvement.

University Club Building.

THE CHOICE OF AN ANESTHETIC IN GOITER OPERATIONS*

ELLIS FISCHEL, M.D.

ST. LOUIS

I have often considered why it is that almost all surgeons find a peculiar fascination in operations performed for goiter. Other operations require as much if not more skill. Laryngectomy and resection of glands of the neck for metastatic carcinoma satisfy our (perhaps) primitive desire to attack the throat and yet do not arouse the same enthusiasm. We feel no glow of anticipation when we are consulted about the removal of a gallbladder full of stones or an enlarged prostate, or any surgical problem at all comparable to the feelings with which we approach the problem of thyroidectomy. Why do we, as surgeons, experience this reaction? I have answered this question for myself by the reply that in no other group of cases does the study of the patient in his or her reaction to the disease bear so much importance in the successful outcome of the operative treatment. There is no other group of cases in which the surgeon must make use of the utmost of whatever finesse he may possess. While this quality of finesse is important in every contact between a goiter patient and those about him or her, nowhere does it come more into the foreground than in the choice of an anesthetic.

I cheerfully admit that the larger proportion of patients suffering from goiter can be operated upon successfully under the influence of

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

any one of a number of different anesthetics. The simple colloid goiter which is to be removed for cosmetic purposes or for its potentially harmful qualities presents no problem of any sort, and the surgeon probably chooses that method of anesthesia which most suits his personal convenience on the day of operation. But the extremely toxic patient, alert, intelligent, fearfully apprehensive, with already damaged heart in such condition that any added stimulation or shock, or poison, may prove fatal, how can we best safeguard such an one in our choice of an anesthetic? Here I do not believe that fixed rules can be applied, and it is here that the quality of finesse on the part of the surgeon is of most importance.

In this day of increasing frequency of surgical operations and of a more or less well informed lay knowledge of matters medical and surgical, I believe that better results are obtained in the majority of cases by endeavoring to make the patient understand what we are trying to accomplish. For instance, any impartial judge will admit that an operation under local anesthesia is less dangerous than the same operation performed under an inhalation anesthetic, provided that all pain and psychic shock can be eliminated equally well. Therefore, in the case of the general run of goiter patient who knows the operation of thyroidectomy is to be performed, the question of the anesthetic can be discussed in a quite casual way, laying before the patient the advantages of each method. Many patients have a horror of being "put to sleep." They much prefer to have an operation while conscious, provided they will suffer no pain. These patients can be reassured and comfortably carried through on local anesthesia if they are told that the operation is quite regularly performed without a general anesthetic, but if at any time during the operation they wish to be put to sleep everything will be in readiness to carry out their wishes. About an equal number of patients, when the subject of anesthesia is broached, will exclaim, "I want to be put to sleep: I don't want to know a thing about what is going on." For these patients, unless there is some grave contraindication, I believe an inhalation narcosis should always be administered. There remains that small but most important group, the very toxic patients, among which are numbered most of our fatalities. These patients are usually best handled in a masterly manner with the surgeon in supreme command of every phase of the case. The patients must be impressed with the fact that they are no longer their own boss. They should be told that the operation (if there is to be an operation) will be performed at some

future day at the entire discretion of the surgeon, and the question of anesthetic not mentioned. These patients are frequently best anesthetized by inhalation in bed and brought to the operating room unconscious.

Occasionally we will be completely deceived as to the mental stamina of a patient. Recently a red-haired, strong-minded woman in the mid-fifties with very obvious exophthalmic goiter walked into my office with the statement that she was now in proper condition to have her thyroid gland removed, and since I had been recommended to her she thought she would consult me. In other words, she came in to see how she would like me as her surgeon. In the course of our conversation I found that she knew as much about her disease and the various methods of dealing with it as I did. She even discussed the method of "stealing" the gland without having the patient know she had been operated upon. In fact, she had herself so well in hand that I anticipated no great difficulties should she decide to accept my services. She consented readily enough to go to the hospital for a few days' preliminary study. These studies confirmed her own and my first impression that she was a satisfactory risk. We had agreed upon gas-oxygen anesthesia. The morning of the operation arrived. She was in a state of most acute hyperthyroidism: dyspneic, a racing pulse, swollen feet, increased exophthalmos, and ready to "jump out of her skin" at the least provocation. I found she had gathered her family about her the evening before, had tearfully bade them goodby because she knew she was going to die, and had not slept or rested a moment all night long. Of course the operation was cancelled. After two days she quieted down sufficiently for a frank talk. I confessed she had fooled me completely; I had thought she had enough control of herself to go through the necessary treatment and I had more or less permitted her to have her own way. But now things were to be different; unless she put herself absolutely in my hands, not question anything I did, she would have to go elsewhere for treatment. She was so sick and so fearful of being deserted that she pleaded with me to be kind to her and she would do anything I wanted. It took over three weeks to coax her heart and mental state back to a condition where operation could be considered, and then, on her fourth inhalation of gas-oxygen, she was taken to the operating room and lobectomy performed. She woke up in bed again and after a very near approach to death's door made a satisfactory recovery. The interesting feature of the case was that after the first cancellation of the operation neither she nor I ever

mentioned the word "operation" again. In the dressings following the first lobectomy the word "wound" was carefully avoided and I don't know to this day when she first discovered she had had an operation. She returned three months later in much improved condition for removal of the remaining lobe. I was again cautious about her mental reaction and assured her all I wanted to do was to remove the rather unsightly scar left from the first operation. She accepted this statement without question and was able to face the operation calmly, requesting only that she be anesthetized in her room before being taken to the operating room. I have often thought about the working of this woman's brain and have concluded that the only thing that saved her was her own realization that she could not face an operation with enough fortitude to survive, and she *wanted* to be fooled into the belief that she *was* fooled. She was entirely too well informed and too intelligent for me to believe that I had ever really done anything she didn't know about.

So far I have purposely avoided a discussion of the technique of administering the various anesthetics. Anesthesia really begins with our first contact with the goiter patient by trying to establish confidence which will do much to quiet the over-active brain. Then come the usual sedatives, bromides, luminal, or veronal. Two days before operation I prefer to give a test dose of scopolamin. The dose is one-half that I believe indicated for operative anesthesia. This test dose is to make sure the patient will not be excited by scopolamin. The morning of the operation morphine is combined with scopolamin and given hypodermically one and one-half hours before operation. The dose of both these drugs is determined by two factors, the degree of irritability of the nervous system and the weight of the patient. Unfortunately neither of these factors is an absolute guide. Therefore, I make it a point to visit the patients just before they are sent to the operating room and if they are not asleep or very drowsy an additional dose of morphine is given. These general rules are applied whether the operation is to be performed under local or inhalation anesthesia. The only exception to the preliminary hypodermic of rather large doses of morphine is that case with marked symptoms of tracheal obstruction. A patient who must sit up to get enough air to breathe comfortably is not a safe patient to whom to give morphine. If local anesthesia is to be used without an inhalation anesthetic, I use $\frac{1}{2}$ per cent. novocain with three drops of adrenalin 1-1000 added to each ounce of solution, infiltrating the tissues

after the method of Braun. As yet I have had no ill effects from the use of adrenalin and I consider its advantages in all cases outweigh its harmful action in the occasional case. If an inhalation anesthetic is used, I also use the same novocain solution but infiltrate only the line of incision, the subcutaneous tissue beneath the flaps to be raised and the tissue about the upper poles. Nitrous-oxide-oxygen is my inhalation anesthetic of choice. Here the experienced anesthetist is of the greatest assistance, and none but an experienced anesthetist should be permitted to give an inhalation anesthetic to a goiter patient. There are only two reasons for putting patients to sleep in an operation on the thyroid gland, to allay mental shock and to keep them quiet enough to carry through the operation. Pain can always be eliminated by a careful infiltration of the tissues with novocain. Mental shock and restlessness are frequently independent of pain. I have had two men patients with toxic goiters who appeared in every way suitable for local anesthesia, who squirmed and wriggled in an embarrassing and dangerous way in spite of the administration of a grain of morphine before operation. Neither complained of pain or showed evidence of anxiety; they both stated they "just couldn't keep still." Ether is reserved for the patient with exceedingly high blood pressure and for the patient with obstruction of the trachea. When given in the later type of case, I have instruments at hand for immediate tracheotomy.

The preceding remarks may be summarized briefly as follows: The proper choice of the anesthetic for the surgical treatment of goiter should be based upon a definite plan of minimum excitation of the patient's nervous system with the least amount of anesthetic agent. The writer's plan is based upon the theory that many anesthetic agents combined are less harmful to the patient than larger amounts of a single anesthetic. All patients are handled by approximately the same progression beginning with the psychic attempt to gain the complete confidence of the patient, then bromides and so on through the series to complete ether narcosis if necessary, but with emphasis laid on the only as far as necessary. No doubt the greatest factors in the success of the anesthesia are the same as those which govern the success of the operation: a thorough understanding of the disease with which the patient is afflicted, and, more important still, a correct interpretation of the effects of the disease upon the individual patient under consideration.

PATHOLOGY OF THYROID HYPERPLASIA*

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Given a suspected case of thyroid disorder, the first question asked the pathologist is, what help can the laboratory man offer the clinician in the diagnosis and prognosis of such conditions? First of all, there is the basal metabolic rate determination. There is no question of the value of this test when properly applied; and with the improved machines that are available today the application of the test is comparatively simple. As Dubois has stated, "it is no longer the bow of Ulysses which could be strung only by the great Ithican himself."

By basal metabolic rate we mean the minimum amount of heat production with the body at rest and at least twelve hours after the ingestion of food. The level of basal metabolism, as has been shown by a great mass of observation, is regulated particularly by the activity of the thyroid gland. In cases of diminished thyroid activity we will always have a lowered basal metabolic rate, and this rate will increase with the activity of the gland, so that not only can we differentiate a toxic from a nontoxic goiter but it serves, moreover, as a quantitative test, so that treatment can be regulated by its use. Outside of increased thyroid activity, fairly high readings are found in Hodgkin's disease, lymphocytic leukemia, secondary anemia and acromegaly; but these should not be difficult of differentiation. Basal metabolic rates below minus twenty may be found in diabetes, Addison's disease and hypopituitarism, but these conditions are not usually confounded with myxedema, while myxedema is frequently overlooked without this test; and it is the only accurate means of determining a thyroid or a nonthyroid obesity. As with all machine made tests, intelligence has to accompany's one's observations. Patients with myxedema who have been under treatment with thyroid extract may have a normal, or increased, basal rate. Exophthalmic patients may have remission in the activity of the gland though still suffering from the results of the disease. Anemia or fever or inanition may complicate the disease. Starvation will, of course, lower the basal metabolic rate. In general, however, I think it is fair to say that we have no more reliable test in all laboratory medicine than the determination of the basal metabolic rate as a test of thyroid activity, and that operating for hyperthyroidism without obtaining a high basal metabolic rate is abso-

lutely unjustifiable. High pulse rate, nervousness, tremor and persistent weakness may be due to conditions other than hyperthyroidism and unless any or all of these symptoms are accompanied by a high basal metabolic rate, the diagnosis of hyperthyroidism can not be made.

The next practical laboratory aid in the consideration of the various thyroid disorders is the microscopic study of the gland in surgical and autopsy material from goiter cases.

It is natural that we should seek to classify goiter and, since there are as many varieties of thyroid enlargement as there are of synthetic gin, classification has presented various difficulties. As with diseases of the kidney, it is relatively easy for the clinician to make his classification, and it is relatively easy for the pathologist to classify the changes seen under the microscope, but it is difficult to work out a classification that will satisfy both the clinician and the pathologist. At least five groups seem to be necessary to include the various types of thyroid disorder. Under group 1 we may include the simple goiters that cause few if any symptoms and show no increase in the basal metabolic rate. They may be associated with adolescence, pregnancy or infectious diseases. Under group 2 we may include thyroid adenomata that cause few if any symptoms and show no increase in basal metabolic rate, but which may go on to: group 3, thyroid adenomata (so-called toxic adenoma) that do give symptoms, such as tremor, tachycardia, muscular and nervous weakness and loss of weight, and which do show an increase (though not extreme) in basal metabolic rate. Group 4, true thyroid hyperplasia (Graves' disease, exophthalmic goiter, with all the well known symptoms and greatly increased basal metabolic rate that we see in this unfortunate condition. Groups 3 and 4 may be associated, the hyperplasia arising in a group 3 gland. Group 5 is reserved for the malignancies which have no special place in this discussion except to say in passing that many cases of hyperplastic goiter are diagnosed as cancer not only by the amateur but by first class histo-pathologists who have not been aided by a clinical supplement to the microscopic slide. Other histological factors that have to be considered are the regenerative and degenerative changes and lymphoid infiltrations that complicate thyroid pathology.

To put this in another fashion, we find in the thyroid gland:

1. Hypertrophy (functional, with hyperemia) usually associated with a growth period, or sexual disturbance, or infection, and more common in certain regions than others.

2. Adenomatosis. A tendency to tumor for-

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mation in the thyroid that may or may not be accompanied by toxic symptoms.

3. Hyperplasia. General increase of cells and cell function throughout the gland (not necessarily with enlargement) and giving rise to a severe train of symptoms which we call "exophthalmic goiter," Graves' or Basedow's disease.

Any one of these three groups may be associated with any other one or any other two and may be accompanied by various degenerative or regenerative changes or by lymphoid infiltration.

Given a typical diffuse parenchymatous hyperplastic goiter the pathologist can closely tell you the condition of the patient and estimate the basal metabolic rate from a glance at a frozen section. But not so with certain of the adenomatous types and diffuse colloid types in which the clinical symptoms may be way out of proportion to the histological findings. Endeavors have been made in various ways to correlate this work more closely. Thomas, Webb and Baumgartner have recently studied 100 goiter cases for a comparison of the clinical and microscopical findings. The clinical diagnosis in these cases was colloid 12, exophthalmic 9, non-toxic adenomas 35, toxic adenomas 44. The microscopic diagnosis was colloid 43, exophthalmic 11, non-toxic adenoma 21, toxic adenoma, 23.

This careful study only serves to confirm the agreement of the clinician and pathologist on hyperplastic (exophthalmic) goiter and shows that many of the adenoma cases that are clinically and metabolically active show no active pathological findings, and also that about one-third of the cases that are inactive clinically and metabolically show microscopic activity.

There is one thing to be borne in mind in comparing clinical and microscopic findings in these cases and that is that hyperthyroidism is not a stationary disease but that changes are constantly taking place. The first most notable change in the thyroid in acute Graves' disease is an increased blood supply. From capsular vessels to intraalveolar capillaries, congestion is evidenced by the increased size, softness and bright red color of the gland. Microscopically, proliferative changes are seen, consisting of an increase in the epithelial cells within the alveoli. This may appear as an increase of cells in a single layer, a reduplication of layers, infolding of the lining epithelium or the formation of new alveoli (adenoma-type). The normal cuboidal cells are replaced by high columnar epithelium. Foci of lymphoid tissue may be seen.

The colloid content of the follicles stains less intensely than normal, it appears thinner, vacuolated, or is lost altogether and only a few

desquamated cells and granular debris appear within the follicle.

Now, as clinical and experimental observations have shown, the progressive hyperplasia does not continue its course for a very long time uninterruptedly. There are remissions and exacerbations, or the process may remain stationary or the gland may revert completely to the normal. It is evident, then, that when we examine a gland sent us by the surgeon, we do not know from the histologic picture whether it is progressively or retrogressively active.

The third stage, as we have here termed it, of exophthalmic goiter is of especial interest from a histologic standpoint. The gland in marked hyperplasia is gray-red in color, firm and opaque. If there are no periods of rest for the hyperactive cells, these cells must sooner or later degenerate and die of exhaustion. Glands undergoing this degeneration become smaller and firmer. On section, the gland is dry and granular and may show areas of hemorrhage or degeneration. Microscopically, there is seen increase of stroma with compression of the follicles. The epithelial cells show various degenerative changes. Desquamation of these cells in large and small masses is commonly seen. The colloid is dense and stains deeply.

Patients with burned out glands may show no clinical evidence of a diminution in function of the gland, unfortunately, for, as Wilson has pointed out, they have been so thoroughly saturated with the thyroid toxin that permanent changes in the heart and nervous system are still active and such glands are, consequently, treated surgically sometimes, despite the fact that the patient is on the edge of myxedema.

There is one thing that I have so far failed to mention that is of great importance in goiter pathology and that is the coincidence of thymic-lymphatic and thyroid hyperplasia. Some fifteen years ago I happened on a hyperplastic thyroid that was rich in lymphoid tissue, including typical germinal centers. I thought I had found something new, but even such text books as Osler's medicine gave a discussion of this condition. Virchow noted the frequent combination of thymus hyperplasia and goiter. Roessl reported 52 cases of hyperthyroidism with thymus hyperplasia. Kapelle found thymus hyperplasia present in 79 per cent. of his autopsies on Basedow's disease. In fact, the literature teems with these cases. Warthin has recently gone so far as to classify Basedow's goiter, toxic goiter and toxic adenoma as a constitutional entity, based on a rudimentary hyperplasia of the lymph nodes of the thyroid in connection with a persistent or hyperplastic

thymus and other stigmata of the thymicolymphatic constitution. Warthin states that it is the custom of his laboratory to make the findings of hyperplastic lymph nodes in the thyroid the one essential criterion for the diagnosis of the Basedow's constitution. It is probable that there will be some considerable opposition to this theory as including all hyperthyroidism as thymogenic but it may well serve the purpose of a more careful study of status thymicolymphaticus, which I consider one of the most important of all glandular diseases.

University Building.

THE RADIOTHERAPY OF GOITER*

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To the average radiologist there are probably two types of goiter, the one that he can treat with some measure of success and the other which he cannot influence in the least. This is not a scientific classification but it is practical and no one less than Sir Robert Knox declares that, "So far the applications of radiations in medicine are more or less empirical."

Leaping boldly into the subject, we may say that radiotherapy is a method of choice in toxic hyperplastic goiters with no pressure symptoms; and upon the contrary, radiotherapy is never a therapy for consideration in a nontoxic tumor of the thyroid which produces pressure symptoms.

We believe that if these two salient points be observed, the resulting choice of cases for radiotherapy will serve to establish confidence in the internist and turn the antagonism of surgical enthusiasts to cooperation with the radiotherapist. We must surely get it out of our minds that radiotherapy is *the* method of choice.

It is only a part of the therapeutic regime and even then the quantity, quality and persistence of its use are subject to many qualifying factors.

It is easy to determine the type where the X-ray is not indicated—the tumor of the thyroid which produces pressure in a nontoxic patient (with a low basal metabolism index.) Such a case demands surgery and is a good surgical risk.

There is another type which should be equally exact in demanding radiotherapy—the non-hypertrophic, toxic goiter with a high basal metabolism index and is a poor surgical risk.

Between these two extremes there is a wide

range of goiter pathology and symptomatology which excites the interest of radiologists, lures the surgeon and baffles the internist.

There are many more thyroid cases recognized these days. Some claim that the war has increased the percentage of goiter in men. English writers dwell upon the war cases.

I was about to say that there is much controversy between surgeon and radiologist in goiter therapy but it would be better to remark that there is not much tolerance of surgeons toward radiotherapy. For my part, I am not inclined to cross swords with the surgeon; rather do I think that the radiologist is a surgical assistant in preparing many toxic cases for surgery.

The establishment of radiotherapy in goiter is embarrassed by lack of record of tissue changes by microscopical analysis. The literature is miserably weak in this direction, and surgeons have learned to depend so much upon microscopical proof that they fail to recognize the wealth of accumulated evidence that the X-ray does reduce the thyroid excretion and produce symptomatic results. Radiotherapy is a secretory detergent in all glands, but it has been easier to show actual tissue changes from radiation in other tissues than the thyroid.

There has been an erroneous idea among surgeons that radiotherapy, applied to goiters, produced surgical difficulties such as adhesions and scar tissue. There is ample evidence to the contrary reported by Pfahler, Ludin and more recently by Holmes, Merrill and Richardson. Furthermore, the X-ray has been used successfully in reducing the scar tissue of keloids, burns, wounds and intraperitoneal adhesions. It would therefore seem that such unwarranted assertions should cease. Goiter operations are difficult and delicate. The tissue planes of the neck are complicated and the field of operation is a dangerous one, but there is little excuse for blaming the X-ray for the inevitable difficulties in surgical technique.

The study of the literature upon this subject impresses one with the failure to distinguish the types of the goiter which lend themselves best to radiotherapy. Toxic goiter and exophthalmic goiter are the terms generally encountered.

Personally, it appears that radiotherapy is a symptomatic treatment for hyperactivity of the thyroid and the mere presence of an enlarged thyroid is not sufficient basis for radiotherapeutic attack. Furthermore, the dosage of radiotherapy is inversely to the severity of the symptoms. The more toxic the patient the smaller and more frequent the X-ray dosage. The less toxic, the more massive the dose and at less frequent intervals. The extremely toxic patients, who are also most likely to be extreme-

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ly nervous, should have the X-ray brought to them with silent, portable apparatus, or the application of radium. This is extremely important. Any good effects which might be expected from radiotherapy in the extremely toxic patient are offset by any necessity of moving the patient even to an X-ray laboratory in the hospital. In the less toxic patients they may come to the office or laboratory at one, two or three weekly intervals as the experience and technique of the radiologist demands.

This matter of experience and empiricism in goiter therapy is what makes the subject so unsatisfactory to those who have not witnessed results, and the vast number of cases successfully treated by radiotherapy surely warrant the attention of those as yet unfamiliar.

The use of the basal metabolism rate in analyzing the progress of thyrotoxicosis as reported now by many excellent internists offers a splendid index for therapy. Of course, the subjective relief of symptoms is the clinical index but Walters has acknowledged that this may be extremely misleading. We are all able to produce practically uniform reports of the subjective relief of thyroid symptoms and varying reports upon the reduction in size of the growth and exophthalmos, but it would be far more impressive to report the progress of our cases as Means does, by the basal metabolism rate. Radiologists who are attached to teaching clinics and efficient groups can easily enjoy this method of charting metabolic rates. It remains for the isolated radiologists to become familiar with some method of metabolism rate estimation that he may pursue his goiter therapy more intelligently. His radiotherapy may be applied empirically but the case must be studied carefully during its progress to cure or to surgery.

Surgery must be considered for the cosmetic removal of the enlargement inasmuch as the disappearance of cystic and fibroid tumors by radiotherapy is a matter of failure or long treatment. Surgery must be used to rid the patient of pressure symptoms, preferably after preliminary work to limit the toxic symptoms or failure to reduce the tumor.

It is generally agreed in the literature and it is my personal experience that in toxic goiters the X-ray, and sometimes radium, is the best leading remedy until it fails to relieve the subjective symptoms and to lower the basal metabolism rate. At any time, surgery is available and sometimes necessary. But the comparative analysis of hundreds of cases treated by radiotherapy and thousands of cases reported from surgical clinics does not show any overwhelming advantage to surgery. On the contrary one is astonished at the sublime

confidence of surgery, in spite of its mortality, surgical risk, scarring, percentage of cures, length of time to secure results and the arguments as to the proper surgical attack, ranging from ligation to ablation.

It seems so reasonable to provide an excited, toxic patient with hygienic surroundings, sufficient rest, symptomatic drugs and careful radiotherapy while one is studying the progress of the given case by the newer knowledge of the clinical laboratory.

Rialto Building.

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DISCUSSION

DR. E. P. SLOAN, Bloomington, Ill.: I wish to express my appreciation of the great interest shown in this subject this afternoon. Nine years ago I was invited by the Tri-State Society to hold a goiter clinic in this same hotel. They had a big audience while a paper on pneumonia was being read. Two-thirds left before the thyroid clinic began, and two-thirds of those who remained told me they were not interested in goiter but stayed because they wanted me to have at least a small audience. We had an operative clinic at the German Hospital the next morning and I think that nine-tenths of the men who attended were there merely to give me an audience.

The change in the interest of the profession in this subject is certainly gratifying, especially when we consider that there are over five million people in the United States suffering from goiter. The largest death rate in any one general classification in the registration area of the United States is in that of cardiovascular diseases, and in about eighty per cent. of these cases when seen in clinics where the thyroid question is given proper attention, goiter is found to be at least partially responsible for the condition.

I want to compliment your Association upon what I think is the best symposium that I have ever heard on goiter. The last paper is the best paper on the X-ray treatment of goiter that I have ever heard. I want to testify to the fact that a massive dose of X-ray will absolutely stop the secretion from the portion of the gland exposed.

We have been having interesting results by X-ray treatment that is founded upon the findings of Doctors Sarker and Brown, of Edinburgh. Their theory is that when a patient becomes toxic, the red bone marrow has been stimulated by the thyroid to increased production of red blood cells. The red

bone marrow finally ceases to function and anemia and altered metabolism result from loss of balance between the red bone marrow and the spleen. In early toxic cases exposure of the long bones to radiation is sometimes followed by a spectacular lowering of basal metabolism. In our hands it has been temporary, probably due to lack of technique. Of course theoretically you should treat the spleen after the red bone marrow has ceased to function. It seems to be a most promising field for investigation. X-ray has its place, and your paper on X-ray this afternoon is of the utmost importance.

The public have been led to believe, chiefly through newspaper publicity, that iodine is the treatment par excellence for goiter. But it is not generally clearly understood that *only prophylaxis* is contemplated, treatment being an entirely distinct subject which had best be intrusted to the practicing physician. While iodine holds a definite place in thyroid therapy, its administration requires study and observation of individual patients as well as caution in application of the remedy, lest untoward results or permanent damage be inflicted. The public should be made to understand that iodine supplied to correct iodine deficiency is a nutritional procedure for prophylaxis and is not medical treatment at all.

We often see eight or ten patients in a week with acute exophthalmus brought on by iodine. The majority of these patients have been taking iodine without the advice of a physician. Many have taken tincture of iodine, often as much as ten drops every four hours in a glass of water. The public should be made to know that the iodine treatment of goiter is an entirely different proposition from prevention and should be left to the competent, watchful practitioner; and even then, they should not take iodine unless under his constant observation. When the public understands the difference in the two, and that supplying iodine to correct iodine deficiency for prevention is entirely a nutritional procedure, so much trouble will not result from the lay administration of iodine.

DR. E. P. BUDDY, St. Louis: There are a few points he mentioned which I would like to emphasize. I think it is a question of the proper handling of the patients until such a time as the tonsils can be removed. In many cases it is difficult to find infection. I am satisfied toxic symptoms arise in goiter without infection.

I want to sound a warning as to iodine. In exophthalmic goiter it is all right in preparation for operation. In border-line cases where there is a possibility of changing from simple cases into toxic ones it is very dangerous. In toxic adenomas it is not without danger.

The question of damaged condition to the organ was mentioned by Dr. Nielson and also by Dr. McKay. I think it is the most important part of surgery. It is the question of the function of the heart, kidneys, and of the gastro-intestinal tract. I do not think the patient is a surgical case until the functions of the body are working the best they can under the circumstances. The operation should be done under the best possible conditions. When the patients are vomiting or the kidney functions impaired they are not good operative risks.

The details of the pre-operative preparation are very important in deciding whether or not the patient should be operated. The question of anesthetic I think is an individual one for those in charge, taking the patient into consideration. The basal metabolism test is only one method more we have. Certainly diagnosis can not be made on that alone, but

taken in conjunction with other things. Another use we have made of basal metabolism is in getting the patient used to the mask. It is a simple matter to substitute the gas mask and put the patient to sleep.

As to radium and X-ray, it has been a question in my experience and I should like to ask the surgeons here today if it is not a fact that surgery following X-ray has been more difficult?

I have come to the conclusion that surgery is the treatment and not to wait too long—not to delay with medical methods. If definitely thyroid and they show symptoms of toxemia the patients should be prepared for operation and not wait until the organs are damaged beyond repair.

The condition which that patient is in when operated I think is the most important of all.

As to postoperative conditions, do not be uneasy and do not be discouraged if patients do not get well promptly after operation. Those symptoms go on for months. It is the time when it is hard to convince the patients they are getting well. The majority of patients need iodine following operation. Sometimes the iodine will take care of their symptoms. It takes six months or a year following the operation before those patients are themselves again.

DR. H. K. WALLACE, St. Joseph: Dr. Nielson gave a very exhaustive and scientific discussion of goiters. There is one thing I want to discuss in his part of the symposium, to emphasize what he said about these cases in young girls who have a slight thyroid enlargement or a so-called adolescent goiter. Many of these patients are told they have a goiter and sent to the surgeon, and it is a devil of a job to keep from operating on them. Lots of them are operated. That is the kind of a case that basal metabolism will help in differentiating. This is a physiological enlargement and needs no treatment.

In regard to Lugol's solution or iodine as a preparation for operation, there is no question that it is to a great degree taking the place of preliminary ligations. Occasionally there is a case it does not help and that case can be saved for ligation. In the majority of cases, if given correctly, it will bring the basal metabolism down and get your case in an operable state better than ligation.

The other thing is, its use in postoperative cases. They blow up and have very toxic symptoms with high temperature, rapid pulse, etc. If Lugol's is administered per rectum it is almost miraculous the way it will bring the metabolism down. Routinely we give them forty grains by rectum as a matter of safety.

One patient can be kept in bed with ice packs, and another patient will not stand that. Let the patient sit in a chair. One patient should not have company, another patient will do better with company. You cannot treat this disease in a routine method, you must treat your patient.

With regard to the anaesthetic, that is important too. In these toxic adenomas and the ones that are usually long-drawn out cases, the choice of anesthetic is more important than in exophthalmic cases. In these toxic adenomas it is very important to use a local anesthetic. We block the cervical nerves and the anesthesia is absolutely perfect. There is no pain or reaction or edema afterward which you get with infiltration anesthesia. We use one per cent. novocain and no adrenalin. We have done about 50 cases with this method. There has never been a case where the anesthesia was not perfect. We have always had gas oxygen ready to give and told the patients we would give it if they needed it. So far it has never been necessary to use it.

THE DICK TEST AND IMMUNIZATION IN SCARLET FEVER*

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For a number of years the constant finding of hemolytic streptococci in the nasopharynx of scarlet fever patients has led many to suspect the existence of an etiological relationship. The complications and sequelæ arising in the course of this disease have long been attributed to this organism. The lack of permanent immunity following other infections with the hemolytic streptococcus, its absence at times in fulminant cases, and the failure to produce permanent bacterial immunity by inoculation, all pointed in favor of its being a secondary invader rather than an organism primarily causing the disease. Subsequent studies, however, have confirmed the etiological relationship of the hemolytic streptococcus to scarlet fever.¹ By careful work this organism was isolated in fulminant cases and in other types of scarlet fever, such as puerperal scarlet fever, scarlet fever following burns, and scarlet fever following milk-borne infections. Their identity was proven by Zingher.² He showed that all these organisms contained a soluble toxin which gave results identical with those obtained by the Dicks³ in their work with a hemolytic streptococcus, considered by them to be the cause of scarlet fever. The first indirect experimental evidence of the cause of this disease was reported by Krumwiede, Nicoll and Pratt in 1914.⁴ They reported a case of scarlet fever following the accidental swallowing of a culture of hemolytic streptococcus. Finally all of Koch's four primary requirements have been fulfilled, the criteria that he considered necessary before a given organism could be considered as the cause of an infectious disease, namely: (1) its constant presence in cases of scarlet fever; (2) its isolation in pure cultures; (3) the production of the disease in experimental animals; (4) its isolation in pure culture from the experimentally produced disease.

Evidence adduced in favor of the first law has been the work of Bliss and Tunncliffe⁵ who have isolated the organism from all cases of scarlet fever. The second requirement has been fulfilled by the isolation of hemolytic streptococci in pure cultures from cases of scarlet fever by a great many workers. The production of the disease experimentally (the third law) has been successfully accomplished by Dochez,⁶ who produced a disease in guinea pigs simulating scarlet fever, even to the stage

of desquamation, and by the Dicks⁷ who produced all phases of the disease in volunteers. The last law, namely, the isolation of the organism from the experimentally produced disease, has been accomplished by the same workers.

Once Koch's primary requirements were met and the organism proven to be the cause of scarlet fever, the attention of a large number of bacteriological workers was devoted to determining whether a specific immune serum could be produced. There is a large amount of literature antedating the present work composed of bacteriological data supporting the claim that scarlet fever is caused by streptococci. We come across early attempts at the production of a scarlet fever serum by immunization of horses with this organism. Escherich and Bokay⁸ produced such sera and claimed specific effects from its use, similar to that obtained from diphtheria antitoxin. In view of our present knowledge of scarlet fever, it is probable that these sera may have been obtained by the use of cultures of hemolytic streptococci of a type producing a soluble toxin. The discrepancy in the results of the various sera produced was probably due to the fact that they were obtained with organisms having entirely different biological characteristics. The specificity of these organisms was shown lately by Bliss and Tunncliffe. Dochez has produced a disease in guinea pigs, resembling scarlet fever, and has successfully produced a potent serum by injection of this organism into horses. G. F. and G. H. Dick⁹ produced a potent serum by injection of a toxin derived from cultures of a hemolytic streptococcus. The use of convalescent scarlet fever serum in severe forms of the disease has shown such striking results that it has led workers to believe there was actually present some antibody in convalescent serum. It remained for G. F. and G. H. Dick to show that certain strains of hemolytic streptococci are capable of producing an extracellular toxin which is capable of being neutralized by convalescent scarlet fever serum, and which will produce an antitoxin by being injected into various animals.

From all this experimental work we must conceive that scarlet fever is an infectious disease caused by a specific hemolytic streptococcus, usually localizing in the nasopharynx, producing a soluble toxin which in turn produces permanent immunity, and giving rise to constitutional symptoms, such as angina, fever, rash, and vomiting.

A close relationship exists between scarlet fever and diphtheria. Both are (1) caused by an organism producing a soluble toxin; (2) both have a placental immunity which is trans-

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mitted to the newborn; (3) the immunity produced is of an antitoxic nature; (4) permanent immunity may be produced by artificial immunization; (5) susceptibility to the disease is present in the same age groups; (6) susceptibility is greater among the well-to-do than among the poor and greater in congested districts as compared to those that are less so.

THE DICK TEST

Having found a soluble toxin in cultures from hemolytic streptococci and believing that immunity to this disease is of an antitoxic nature, the Dicks¹⁰ have conceived of a test for susceptibility to scarlet fever analogous to the Schick test in diphtheria. It consists in the intradermal injection of a small amount of a toxin derived from cultures of the specific hemolytic streptococcus. To obviate false or pseudo-reactions arising from the presence of foreign proteins in the test material, a control test must be performed. The material for this control test is obtained by heating the scarlet fever toxin for one hour at the temperature of boiling water. Through the work of F. M. Huntoon¹¹ it has been made possible to reduce the protein content of the solution containing this toxin to a minimum and still retain the original toxicity of the filtrate. He has also shown that this toxin is a protein, not having the chemical characteristics of a globulin, but is precipitated in the higher albumen fractions. The strength of the solution used is the smallest amount capable of causing a local reaction at the site of injection in a known susceptible individual.

TECHNIQUE OF THE TEST

This consists in the intradermal injection of 1/10 to 1/20 c.c. of scarlet fever toxin accurately measured with a tuberculin syringe. The injection is made into the forearm with a twenty-six guage needle. Proper precautions in the preparation of the forearm and the use of sterile apparatus must be observed. The control test is performed about two inches below the Dick test. We have not found any difference in the skin sensitiveness of the forearm in this area. A properly performed test is shown by the presence of a wheal-like elevation in which the opening of the hair follicles is distinct. The material injected is thus confined to a small area where it will exert its irritant action in susceptible individuals, there being no antitoxin in the blood to neutralize the injected toxin. This is similar to the immunological reaction observed in the Schick test.

The readings are made at the end of twenty-four hours and tabulated to correspond to those described by Zingher,² who recognizes the presence of four different reactions: (1) a

positive reaction, (2) negative reaction, (3) negative pseudo-reaction, and (4) positive combined reaction. The positive reaction is in turn divided into three classes, determined by the intensity of response: (a) a two-plus maximum reaction consisting of intense redness and local induration, (b) a one-plus reaction consisting of marked redness with slight or no local induration, (c) a plus-minus or minimal positive reaction marked by a degree of redness varying from intense red to pink unaccompanied by induration. The negative pseudo-reaction consists of an erythema and induration which varies in extent and intensity but is alike in both the test and the control. The positive combined reaction shows a redness and at times induration in the control test and this is superimposed upon a true positive Dick test, intensifying the response. It comes on between the fourth and fifth hour after injection, usually reaching its maximum in twenty-four hours, and in those instances where erythema alone was present the reaction disappeared within seventy-two hours. Those that showed induration lasted as long as ten days. In several instances desquamation was noted over this area accompanied by slight pigmentation. The effect of this irritant toxin appears and disappears earlier than in cases of diphtheria. This is probably due to an action on the capillaries rather than on the epidermis itself.

TABLE I.

Age	Holy Rosary School				St. John School				St. Francis School				Orphans Home				Alfred Benton Dispensary			
	Positive	Negative	Neg. Pseudo	Pbs. Comb.	Positive	Negative	Neg. Pseudo	Pbs. Comb.	Positive	Negative	Neg. Pseudo	Pbs. Comb.	Positive	Negative	Neg. Pseudo	Pbs. Comb.	Positive	Negative	Neg. Pseudo	Pbs. Comb.
1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0
4	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
5	0	14	0	0	0	0	0	0	5	8	0	0	0	0	0	0	1	0	0	0
6	1	19	1	0	10	0	0	9	25	0	0	1	3	0	0	0	2	0	0	0
7	3	14	1	0	3	4	0	0	7	17	0	0	4	0	0	0	1	0	0	0
8	1	13	1	0	3	8	0	0	8	26	0	1	4	0	0	0	1	0	0	0
9	3	21	1	0	4	9	0	0	4	31	0	1	6	0	0	0	4	0	0	0
10	3	9	1	1	1	13	0	1	3	19	0	0	1	0	0	0	1	0	0	0
11	1	7	0	1	12	14	1	0	6	17	0	1	4	0	0	0	1	0	0	0
12	3	5	1	0	6	19	0	0	8	14	0	1	2	0	0	0	1	0	0	0
13	0	1	0	0	6	19	0	0	8	0	0	1	2	0	0	0	0	0	0	0
14	0	0	0	0	1	10	0	0	2	4	0	0	2	0	0	0	0	0	0	0
15	0	0	0	0	1	6	0	0	0	2	0	0	1	0	0	0	0	0	0	0

Table 1 represents the type of reaction observed in the 573 cases. It will be seen that in the vast majority the reaction is clear cut, being either frankly positive or definitely negative, only a few cases having a combined positive reaction. This is undoubtedly due to the freedom of foreign proteins in the test material and in the control.

Table 2 represents the percentage of susceptible individuals in the various institutions in which the work was done. It will be seen from this table that the results agree very

TABLE II.

	Holy Rosary School	St. John School	St. Francis School	Orphan's Home	Affected Person's Dispensary	Summary
Total Tested	132	173	223	38	18	584
Positive	19	49	52	7	0	127
Negative	113	124	171	31	18	457
% Positive	15.3	28.4	23.3	18.5	0	21.8

closely with those recorded by others, notably Zingher. In one of the institutions the percentage of susceptible individuals is only a little over 15 per cent. One must make a sharp distinction between the results obtained in private schools, private homes, and public schools located in congested districts. In the more congested districts there are naturally more contacts and a greater number of immunes. As in diphtheria, the large number of negative reactors among the poorer classes and congested districts is due, not to a natural immunity, but to an immunity acquired as a result of repeated contacts and to mild and repeated minimal infections with the hemolytic streptococcus. Infection with this organism in cases diagnosed as sore throat has led to the production of an antitoxin which protects the individual against the toxic effects seen in the more virulent type of hemolytic streptococcus infection. Sore throat is such a common condition among school children and the scarlet fever eruption is often times so transient, that many mild cases go unrecognized. This accounts for the occasional outbreak of epidemics of this disease.. Some of these children undoubtedly become carriers and transmit the disease to those without immunity among them.

TABLE III.

Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Total Tested	0	0	8	5	43	79	54	66	85	52	65	60	37	19	10
Positive	0	0	2	2	9	18	13	13	12	7	20	18	7	3	1
Negative	0	0	6	3	34	61	41	53	73	45	45	42	30	16	9
% Positive	0	0	25	40	21	23	24	20	14	14	31	30	19	16	10

Table 3 shows the percentage of susceptibility in different age groups. It is difficult to explain the high susceptibility at ages of 11 and 12 except on the basis of too few cases. Had there been several thousand cases these figures would undoubtedly be lower and would conform to the well known clinical observation that, taking a large group of individuals, the susceptibility diminishes as age increases.

VALUE OF DICK TEST

Any clinical test is as valuable as the amount

and accuracy of information derived from it. The Dick test is a valuable means of sharply differentiating susceptible from immune cases. There are absolutely no dangers connected with its exhibition which would necessarily diminish its usefulness.. To date among the published reports and in our own cases not a single case found to be immune by the test has contracted the disease. On the other hand, in our work and that of others, several cases known to be susceptible to the disease as shown by the Dick test, contracted scarlet fever and subsequently were found on retest to be immune. Information of this character is of the utmost importance in the prevention and spread of this serious illness. Borderline cases can be diagnosed with considerable accuracy. If an individual presents a negative Dick test at the outset of a disease simulating scarlet fever we can, we believe, definitely say that the illness in question is not one of scarlet fever. If the reaction is positive and remains positive at the end of two weeks the case is most likely not one of scarlet fever. If the reaction is positive at the onset of illness and is negative ten days later, the case has been one of scarlet fever. It is also of the utmost usefulness in determining development of immunity following artificial immunization. In this connection, several cases that have come under our observation during this period are worthy of record.

CASE REPORTS

Twin girls, age 8, were tested and one was found to be susceptible to scarlet fever, the other reacted negatively to the Dick test. Both children attended the same school and were similarly exposed. The positive Dick reactor contracted a typical attack of scarlet fever, and the negative Dick reactor, while similarly exposed and in constant contact with her sister, at no time had any disturbance whatsoever. Four weeks after the onset of the disease another Dick test was performed on the convalescent case, and this time the test was negative. The child had immunized herself during this period. Two cases of similar nature are reported by the Dicks.

Another case was that of a boy, age 5, who for two days had typical symptoms of scarlet fever before he was isolated. Three other children in the same family slept in the same room with him and were constantly exposed during this period. During convalescence all four children were tested and were found to have negative Dick tests. The three other children did not contract the disease because they had an antitoxic immunity which made them insusceptible.

In one family of four, where a case of scarlet fever developed, one child and the father reacted positively to the Dick test, whereas the mother presented a negative reaction. Within ten days both the father and the other child contracted the disease, while the mother, who was immune, although in constant attendance on the ill child, was not affected in the least.

One institution containing 38 children showed seven positive Dick reactors and 31 negative Dick reactors. The positive Dick reactors were immunized. These children were constantly exposed

in a school district where scarlet fever was prevalent. Not a single case of scarlet fever developed. A similar institution containing about the same number of children had 19 cases of scarlet fever.

IMMUNIZATION

The injections were made at weekly intervals, the course consisting of three. The strength of the first dose was equal to 100 skin test doses; the second, to 250 skin test doses; the third, to 500 skin test doses. Local swelling and tenderness at the site of injection was noted in about 50 per cent. of the cases. In one instance there was a rise in temperature accompanied by sore throat and vomiting. Several cases vomited within a few hours after injection. No rash was noted in any case following administration of the toxin. Nose bleed was noted once. The untoward symptoms in all cases subsided in twenty-four hours. It is well worth noting that the above symptoms were present only after the first injection, although the third contained five times the amount used in the first.

A large amount of literature is rapidly accumulating on the subject of immunization against scarlet fever. The rationale of immunization against the disease is based on the fact that the hemolytic streptococcus produces a soluble toxin, and that immunity following an attack of scarlet fever is of an antitoxic nature. The Dicks were the first to show that when this soluble toxin was injected into susceptible individuals, they could produce all the symptoms of the disease itself.¹³ Zingher reported successful results in immunization of a large group of susceptible individuals.² Their method of immunization consists of the injection at weekly intervals of the filtrate of the specific hemolytic streptococcus culture from which the protein content is almost entirely eliminated by the method of Huntoon.¹⁵ We have immunized to date 75 cases. After an interval of eight weeks the Dick test was repeated and we found that out of 68 children who were retested, 46 gave a negative reaction. The others gave a positive reaction but in every instance it was less pronounced than on first test, showing partial immunity. It may even be possible, as in diphtheria, to decrease the toxicity of the material injected and increase its immunizing qualities. The immunized cases and immunes will be observed for a period of years.

SUMMARY

1. The Dick test is of value in differentiating susceptible from immune cases.

2. In our series, negative Dick reactors have not contracted scarlet fever although constantly exposed, while positive Dick reactors have contracted the disease.

3. The Dick test is a safe procedure to employ in routine work.

4. Borderline cases can be diagnosed with considerable accuracy.

5. A negative Dick test can be interpreted as indicating immunity to scarlet fever.

6. Immunization is a safe procedure and is not accompanied by serious reactions.

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THE DEVELOPMENT AND APPLICATION OF CHOLECYSTOGRAPHY*¹

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The diagnosis of cholecystitis has been possible only after extensive, and often irreparable, pathological change of important tissues has taken place. Necessarily, this means that the danger to life by surgical treatment and the prospect of failure to secure relief are higher than would be the case if an earlier diagnosis and intervention were possible. The study of Deaver and Reimann¹ concerning this point is instructive. There is no reason to believe that the wide prevalence of cholecystic disease means that such affection is innocuous. The autopsy incidence of cholelithiasis is not a true index of the morbidity.

Clinical and experimental investigations by Graham and his coworkers^{2, 3, 4} established certain facts in relation to this affection that may be epitomized as follows:

1. Cholecystitis is often a localization of an infective process originating in the area drained by the portal circulation.

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1. From the X-ray Department, Washington University Medical School.

2. The mediate cause of cholecystitis in the majority of instances is a hepatitis.

3. The gallbladder becomes infected through the lymphatics. Once this has taken place, there may be established a mutual infection and reinfection between gallbladder and liver, constituting a vicious circle.

4. Infection of the gallbladder by extension of mucosal infection is exceptional. (This view is supported by other observers, for example, Deaver and Reimann.¹ The cholecystitis is, therefore, usually an interstitial process.

5. The gallbladder constitutes a point of surgical attack which promises relief of the infection; but it must be supplemented by the correction of other lesions, of the portal system especially, and of whatever other foci of infection that may exist. It is important to relieve the liver of bombardment by infection from any source.

The last paragraph needs some elaboration. Why should drainage or removal of an infected gallbladder give relief when there is a coexisting infection of the liver? The explanation of this lies in the relative activity of the two organs. The liver has a greater capacity for overcoming infection through its superior drainage and blood supply. There are certain sequelae to infection of the gallbladder which are without parallel in the liver. These are, stone formation and the production of infiltrated, rigid walls in a hollow viscus which has among other functions that of reservoir. Either of these pathological manifestations results in a condition similar to that arising about a foreign body, with the great likelihood of recurring infection taking place. Hence it is, that removal (or, less often, drainage) of such an infected or potentially infected structure may result in the riddance of the portal area of infection.

From the foregoing conclusions this hypothesis is formulated: Early surgical intervention when cholecystitis is suspected (with cholecystectomy rather than cholecystostomy) is mandatory.

The difficulties in the way of early recognition of cholecystitis lie in the limitations of the available diagnostic means. These means are:

1. History and symptoms.
2. Physical examination.
3. Elimination of disease of other abdominal structures.
4. Laboratory procedures: (a) Examination of the duodenal contents by the Lyon method; (b) radiological examination.

The symptoms and history of a patient having cholecystitis are notoriously unreliable. Cholecystitis is likely to be confused with the original lesion that gave rise to the infection.

There may coexist, for example, a chronic appendicitis or peptic ulcer. Where they are clear cut, the history and symptoms are those of the aftermath of the cholecystitis. This view has been particularly well expressed by Moynihan.⁵ Cholecystitis is not a stationary condition, consequently the physical findings are those of the particular phase of the disease existing at the time of examination. The value to be attached to them is, therefore, much curtailed. Furthermore, they are open to the same objections that hold in the case of the history and symptoms,—they are late manifestations occurring subsequent to extensive damage.

Diagnosis by exclusion is uncertain because of the reason advanced above,—the originating lesion may still be present.

Since, in the majority of instances, cholecystitis is interstitial and only exceptionally mucosal it follows that examination of the duodenal contents could only give information of the state of the gallbladder in those cases in which the infection involved the mucosa. Lyon's method presupposes also that the gallbladder can evacuate itself. When properly stimulated, Graham and Deakin⁶ concluded, from experimental work, that the gallbladder does not discharge its contents with the Lyon method. Precisely the same result was reached by checking the procedure with cholecystography. Shadows of the gallbladder in animals could not be made to disappear by application of magnesium sulphate to the duodenum. Silverman and Menville⁷ state that they can cause decrease in the size of the dye-filled gallbladder in the human with the Lyon method. From this they conclude that this method drains the gallbladder. Winkelstein⁸ has recovered phenoltetrachlorophthalein, after intravenous injection, from the duodenum by the Meltzer-Lyon technique, which he thought came from the gallbladder. We have concluded, however, that the halogen producing the shadow of the gallbladder leaves the gallbladder as it entered it, by way of the cystic duct. This is in contradistinction to Sweet,⁹ who believes that anything which enters the gallbladder does not normally pass out by way of the cystic duct.

Radiological methods should always be employed in the diagnosis of suspected cholecystitis because when definite signs are elicited by the X-ray they are quite conclusive. However, the structural changes indicating, by X-ray, cholecystic disease are very late sequelae of infection. They depend on the presence of dense stones, a thickened gallbladder wall, and the effects of adhesions. Adhesions, from the very nature of things, must be extensive to give rise to signs. For the foregoing reasons the X-ray findings are as insufficient as the ac-

cepted symptoms of gallbladder disease in the early recognition of cholecystitis.

The realization of the inadequacy of accepted methods for the diagnosis of early cholecystitis led Graham and his coworkers, in 1923, to conceive the idea that if the gallbladder could be made visible by X-rays, not only might earlier and more certain signs of pathological changes in that organ be made recognizable, but also that such a procedure might be a more accurate index of function of both liver and gallbladder. The underlying thought concerning the functional test was that by being able to time the appearance of an opaque substance in the gallbladder, after its intravenous injection or oral administration, a fairly accurate idea might be obtained of the secretory function of the liver as well as such considerations as concentrating power, contractility, etc., of the gallbladder. In order to accomplish this purpose it was necessary to find some artificial contrast medium that could reach the gallbladder in the bile. The principle underlying the use of artificial contrast media, opaque ingesta, opaque injections, gas injections, hitherto used, has been largely if not wholly mechanical. It is necessary to employ physiological processes to visualize the gallbladder. It may be mentioned that, with the exception of the elimination of sodium iodide by the kidneys, pointed out by Osborne, Sutherland, Scholl, Rowntree¹⁰ (which is of limited application), cholecystography is the first successful attempt to introduce artificial contrast media by way of the circulation.

The problem of rendering the gallbladder opaque to X-rays consisted in securing a substance which would be largely eliminated in the bile and at the same time have a high specific gravity. These requisites are present in the halogenated phenolphthaleins. Thirty substances have been tried in an attempt to find the best compound for the purpose. About ten of these compounds will produce the desired opacity, but because of toxic or staining effects they are not of practical use.

The sodium salts of the halogenated phenolphthaleins have finally proven to be the ones that meet the necessary requirements. Sodium tetraiodophenolphthalein, because of its greater specific gravity, was the one first employed but, because of the impurity of the salt then available, its use was not extensive and a change to the bromine salt was made. The latter possessed some toxicity but less than the iodine compound. Since a pure iodine salt* has been secured it has been exclusively used. Reference for the details of the earlier work is made to the publications of Graham, Cole and Co-

pher^{11, 12, 13, 14, 15} who applied the term "cholecystography" to the procedure of rendering the gallbladder visible.

Since slight deviation in the steps necessary to carry out cholecystography may easily vitiate the result, certain directions will bear repetition. Gastric digestion should not be in process in the period in which the dye is being excreted by the liver or it may pass into the intestine and not reach the gallbladder for concentration. Four hours usually suffice for the image of the gallbladder to appear in the human following intravenous injection. If the oral method is used it will require twelve to fifteen hours for the appearance of the image. The intensity of the shadow should increase from the twelfth to the eighteenth hour, so food should be withheld as far as possible until those hours are reached. If food must be given, it should be non-protein and limited in quantity.** Theoretically, there has been some ground to suppose that food intake might cause the dye to disappear from the gallbladder, but there is accumulating evidence that once the dye is concentrated in the gallbladder no such loss takes place.

In addition to those precautions that should always attend such a procedure, extreme care must be taken to prevent any escape of the dye into the tissues when the intravenous method is employed. A slough may follow if this occurs. We have been fortunate enough to escape this bad result with the iodine compound. One of the earlier cases had a venous thrombosis, which subsided without serious consequences.

The functions of the gallbladder as related to the behavior of the salts used in cholecystography in normal subjects may be stated as follows: 1. To act as a reservoir. 2. To concentrate bile and the dye. 3. To vary in size. 4. By some means, to discharge its contents.

When we began the interpretation of cholecystograms it was with the idea, by analogy with other X-ray procedures, of demonstrating chiefly anatomical changes. These when encountered are striking and conclusive but they the most infrequent. We have, in consequence, relied almost exclusively on aberration of the functions enumerated above for the purpose of drawing conclusions. In a sense, the test is a functional one, and it is for that reason that we prefer the intravenous method of administering the dye. A known amount of the dye enters the circulation by intravenous injection, whereas, if the alimentary tract is the medium

*We feel that it is imperative to have a pure salt. That prepared for us by the Mallinckrodt Chemical Works has proved reliable.

**It has been shown by Cole (American Journal of Physiology, vol. 72, pp. 39-42, March, 1925) that the presence of food, especially protein, or acid in the stomach, as well as the duodenum, causes a relaxation of the sphincter of Oddi, thus allowing the escape of bile from the biliary system into the intestinal tract.

of entry for the dye, the quantity reaching the circulation is subject to many influences which may be possible sources of error. For example, the laxative affect of the phenolphthalein is a factor. There are, of course, many others.

Our interpretation of cholecystograms is based on this test as one of function. This renders interpretation quite simple. If a gallbladder is normal, the shadow begins to appear about the fourth hour following intravenous injection, or the twelfth to fifteenth hour after administration by mouth, changes in size and intensity at subsequent examinations and is no longer visible twenty to twenty-eight hours after the image appears. It is then obvious that the hepatic and cystic ducts are patent, the mucosa of the gallbladder is absorbing, its walls are flexible and the extrahepatic biliary system is normal. The flexibility of the walls possibly accounts for the expression of the dye from the organ.

If no shadow is obtained there may be any of the following factors present:

1. An insufficient liver.
2. An obstructed duct: (a) hepatic, (b) cystic, (c) common, with accumulation of bile and excessive diffusion of dye therein.
3. A failure to concentrate bile, due to (a) a non-functioning cystic mucosa, (b) non-functioning cystic lymphatic system.
4. Failure of intestinal absorption of the dye following oral administration.

If a shadow is obtained which is faint, late in appearing, or constant in density, the concentrating function of the gallbladder is at fault, which may be the result of (a) diseased cystic mucosa; (b) diseased cystic lymphatics.

If a shadow appears promptly, if it is of uniform size, or small throughout, is slow to disappear, then the evidence is of an infiltrated gallbladder wall.

From the anatomical aspect we have found that there is a rather wide variation in position, contour and size of the gallbladder. Excessive size of the organ would hardly be demonstrable by this test, for this condition usually arises through an obstruction of the cystic duct. There is a fairly wide range of mobility in the normal gallbladder aside from that of respiration and it can be found in widely different localities in the same patient at different times during the examination. Using double exposure, full inspiration and expiration, an excursion of the gallbladder shadow was smaller than that of the upper surface of the liver.

Fixation of the gallbladder shadow indicates pericholecystic adhesions of extracystic origin. Under our hypothesis of intra-abdominal infection these would be rare. They have so far not been encountered. In our operative cases,

adhesions have practically always been present, but only in those in which the gallbladder had not given a shadow.

Cholecystography has done little to visualize stones or the rare condition of tumor of the gallbladder. We have had but two such examples of stones that might have been demonstrated only by the dye, both unconfirmed by operation. The probable reason that this should be so is that an organ carrying stones could not reasonably be expected to have an absorbing function remaining, except very early in such a case. The same statement will hold for a tumor.

There is good ground to believe that occasionally there are individuals of "acholelithic diathesis," who may precipitate sufficient cholesterol to cause the formation of a pure cholesterol, aseptic stone.* Before infection of the gallbladder takes place, such a stone could be demonstrated as a negative shadow by cholecystography. One of ours seemed to be of this nature.

Cholecystography may be useful in eliminating from consideration the gallbladder as the offending organ in obscure abdominal conditions; for instance, calcified areas and tender points. Cholecystography in certain cases is a simpler means of distinguishing between gallstones and kidney stones than pyelography.

The writer¹⁶ has published elsewhere the results of cholecystography. Sixty cases were checked by operation and gave 92.5 per cent. correct diagnoses for this method. Since those figures have been published, cholecystography has been carried out on 105 additional cases, twenty of which have been operated on. The cholecystographic and operative findings agreed in 100 per cent. of these cases. Since this test was first used it has been applied to a total of 261 individuals of whom eighty have been operated on, giving a grand total of 96.23 per cent. correct pre-operative conclusions. In fairness, it must be stated that it is possible that some of the patients who gave cholecystograms that we considered normal might have had a diseased gallbladder, but against that is the fact that neither symptomatically nor clinically was such suggested. Further, in our series of normals that have come to operation for other causes, inspection and palpation of the gallbladder revealed that organ to be normal to those methods of examination. The writer¹⁶ has, however, pointed out elsewhere that cholecystography is a more delicate method of determining disease of the gallbladder than are inspection and palpation at operation.

Several objections can be raised against this test. The chief one is the disagreeable reaction and possible danger from the drug. Fourteen

*One case which would tend to confirm this theory has recently come to operation.

per cent. of our patients who were injected with sodium tetrabromphenolphthalein have had a reaction of consequence. The effects of the reaction have always disappeared by the time the patients have arrived in the X-ray laboratory. No case has given us alarm so far as the safety of the patient's life is concerned and we have heard of no death arising from the use of any of these drugs. (Stewart.¹⁷) Since we have been able to secure a stable or nontoxic preparation of sodium tetraiodophenolphthalein we have used it exclusively and have found reaction almost nil. When it occurs it is of trivial character. So true is this that its use has been instituted on out-patients with good results and perfect safety. This will be reported later.

We believe that cholecystography should only be used to determine cholecystitis in doubtful cases, and that it is unnecessary in those frankly the subject of cholecystic or biliary diseases. Likewise, it should not be employed in individuals in whom, from any cause, an operation is precluded. The contraindications for its use are at once manifest. In two of our routine cases we inadvertently gave the dye to elderly people with low arterial tension, one who, we subsequently discovered, had a myocarditis and the other with extensive arterial sclerosis. Both reacted severely. These were the only ones for whom we felt concern. From these experiences we do not feel that cholecystography is to be used in elderly persons with low arterial tension. When such a reaction occurs, the use of adrenalin intravenously or intramuscularly will be found helpful.* Younger subjects with low tension and without cardiac or arterial damage have not reacted unduly.

Though the opaque gallbladder may be visualized fluoroscopically, radiography is essential in the procedure. The gradations in density are too slight to be recognized by the screen. Not only is this so, but the technique must be of the finest type. Technique suitable for showing kidney outlines will suffice to bring out the opaque gallbladder. It is pertinent to remark here that faintness or lack of density in the shadow, to which we attach much importance in interpretation, is to be relied on only in the case of technically excellent films. It should also be recognized that this sign is governed by the thickness of the patient. We prefer not to use the Potter-Bucky diaphragm, but this is a matter of one's personal inclination. It is scarcely necessary to say that immobility of the patient must be secured.

The films should be made with the patient

in the prone position. They can, however, prove satisfactory in the opposite pose. In the erect posture, films have been secured which indicated that little difference in result was to be expected in the recumbent and standing poses. Conceivably, a small amount of dye might sediment in the fundus in the latter position. Cholecystograms have been made with the patient in the right lateral position, but there is no indication that this will prove a useful procedure.

SUMMARY

Lessening of the morbidity in cholecystic disease can be attained by surgical means, particularly if employed early. The bar to this early surgical intervention has been inadequate diagnostic means. Cholecystography makes possible the earliest and surest diagnosis of cholecystitis. It also brings to radiology a new principle, that of employing a specific function of an organ to bring about artificial contrast of density.

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*The use of adrenalin to combat unfavorable reaction following the use of tetraiodophenolphthalein was first advocated by James T. Case, of Battle Creek, Michigan.

CARDIOVASCULAR DISEASES*

PROGRESS OF KNOWLEDGE IN FIRST QUARTER OF
TWENTIETH CENTURY

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The twentieth century has, so far, resembled the eighteenth and has differed from the nineteenth and from the seventeenth in that its scientific activities have concerned themselves with the organization and development of the remarkable heritage of discovery bequeathed it by the years which went before. Eras of new ideas do not of course fall neatly into time divisions, but to a unique extent the nineteenth century proved a very fermentation time for valuable speculation and discovery. At the threshold of the century, preventive medicine was launched by the widespread practice of vaccination. Percussion was revived and auscultation established before the century had reached its majority. The science of physiology became transfused with new blood through the labors of Sir Charles Bell, Claude Bernard, Mueller, Gaskell, Marey, Wolf, Weber, and our own Beaumont. The cell as the unit of living tissue was announced by Schleiden and Schwann in 1838 and 1839 and with that doctrine and with the notable improvements in the microscope made by Wollaston, Herchel, Brewster and Coddington, were born the sciences of histology and embryology. The gigantic young science of cellular pathology, almost the product of one man, Rudolf Virchow, was found to be nearly fully grown with the publication of the book of that name in 1858. In the meantime an enormous contribution to nosology, the clinical description of disease, had been made by Bright, Addison, Parkinson, Graves, Stokes, Adams, Cheyne, Charcot, Romberg and Duchenne, who have left their names upon diseases or pathologic pictures, and by Bouillard who described acute articular rheumatism, Louis who classified phthisis and typhoid, Skoda who enlarged physical diagnosis, King who formulated our ideas of extrauterine pregnancy and Gull who described myxedema. General anesthesia was made available for surgical operations by Humphrey Davy with nitrous oxide, by Morton and Long for ether, and by Simpson for chloroform. Semmelweiss showed the contagiousness of puerperal fever. The doctrine of organic evolution burst upon the world. Nearly all our knowledge of heredity was promulgated by

Weismann and Mendel. Kussmaul popularized the stomach pump. Wunderlich established the clinical thermometer as Rynd the hypodermic syringe. McDowell performed ovariectomy. Pasteur proved that certain diseases were caused by minute organisms. Koch found the cause of wound infection. Lister developed antiseptic surgery. Florence Nightingale inaugurated the profession of nursing. Von Behring produced diphtheria antitoxin. Roentgen discovered the X-ray.

When set down even in this bald fashion, it seems quite a breath-taking performance. No wonder the men at the opening of the twentieth century found themselves too busy thinking about the significance of these fructifying ideas to stumble upon any comprehensively original discoveries of their own. It has always been true that any period of great intellectual fruitfulness has been followed by a dormant period—a time of readjustment. The twentieth century has distinctly been such a time; it has been a time of standardization and organization of our new knowledge, of the extension and application of all its developments to every department of clinical and scientific activity. In general it may be said that this development has been distinguished by three characteristics.

First, it has been an organization of ideas and methods already known and their application to new fields of investigation.

Second, it was accomplished by workers all over the world; the results are in a very unusual sense the product of the whole medical profession.

Third, it has been almost entirely clinical—that is, done in practice, using patients as material and following their fortunes over a long term of time.

Nothing illustrates this better than the development of surgery. No other branch of our science received so magnificent an estate from the nineteenth century. It inherited bacteriology, cellular pathology, antiseptic surgery, anesthesia and the X-ray. And, as in the case of many magnificent fortunes, the dawn of the twentieth century found the heirs engaged in a violent quarrel. To cast our minds backward, think of the discussions twenty-five years ago concerning the best way to suspend a uterus, the proper stitch for enterostomy, the results in breast tumors. In the quarter century that has intervened these differences have largely been composed. They were manfully fought out and the methods of surgery have become so standardized that if one visits today a series of surgical clinics he sees less difference in technique between them than there are differences in the leaves on the same branch of a tree. Far from being quarrelsome, surgeons

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

today are as quiet, as peaceful and as contented as so many stockholders of the General Electric Company. Now this result, a very happy one for the patient, has been brought about by an application of the principles of cellular pathology, bacteriology, antiseptic surgery and radiology to every field of clinical surgery. It has been accomplished further by surgeons all over the world trying out different methods and conscientiously comparing their results, allowing the common judgment of the whole profession to be the jury. And lastly, it was clinical: It would be impossible to determine the best results of various kinds of operations except to do them on groups of human patients and observe those patients over a period of years.

In the field of cardiovascular disease a particularly widespread readjustment of ideas has occurred. In no other department of medicine have the researches of the twentieth century resulted in more satisfactory practical accomplishments. Cardiology today may fairly be said to be the most exact department in internal medicine. I have thought that on this, the quarter century meeting of our Association, it might be interesting to pause and renew the work done in this one field—to audit our accounts and see how much has been done.

THE ESTIMATION OF BLOOD PRESSURE

Chronologically and probably in importance the first development of our knowledge of cardiovascular disease in the present century took place in the popularization of our method of the exact measurement of blood pressure. The estimation of blood pressure had, it is true, been done in physiologic laboratories (by Vierordt in 1855) and occasionally by clinicians long before. But it was certainly not common before 1905. In 1903 Cook published the description of one of the early commercial models of the sphygmograph. In 1904 Janeway published his book on blood pressure. Here in Kansas City several clinicians claim to have possessed the first sphygmomanometer used in our fair city. One of these claimants began practice in 1906. I should not be so rash as to attempt to settle the dispute but at least the existence of the controversy dates approximately the introduction into general clinical use of the estimation of blood pressure.

It seems astonishing that the vast framework of fact, speculation and fiction which has been built around hypertension, hypertensive cardiovascular disease, hypotension and other aspects of blood pressure, is only about twenty years old. But note what has been done in that time and how it has been done. By the estimation of the pressure of thousands and tens of thousands of people of all ages, sexes

and conditions of servitude, we have probably more exact anthropometric data upon this subject than upon any other strictly physiologic subject except the pulse rate, the temperature and the respiration rate. Furthermore, in many ways we know what happens to the people who fall outside the average limits. In 1920 the director of the Northwestern Mutual Life Insurance Company¹ made known the mortality of over 7,000 individuals accepted since 1907 with a systolic blood pressure of (1) 100 mm. mercury and less, of (2) 142 mm. mercury on the average, of (3) 153 mm. mercury on the average and (4) of a diastolic pressure of 95 mm. and over. He also was able to publish the mortality rate of over 4,000 individuals observed since 1907 whose systolic pressures were from 10 to 50 mm. mercury above the average. Lee² in 1911 followed 100 cases of hypertension to the autopsy table and recorded the morbid findings in great detail. Janeway³ in 1912 recorded the outcome of 500 cases of hypertension followed for a number of years and the cause and mode of death in 100 of them.

These results are only a minor fraction of the fundamental work done in this field. They indicate the solid structure upon which our conclusions from a blood pressure estimation are based. But note please how perfectly this conforms to the postulates we have laid down above. It is, first, merely an extension and application of an already discovered method to clinical problems. It is, second, the result of investigation all along the line, all over the world by physicians, surgeons, obstetricians and specialists. And third, it has been clinical investigation, carried out on patients and depending upon observation over a period of years, often of following the patient to the dead-house, and correlating the data of the living with the data of the dead before conclusions were reached.

THE EFFECT OF THE NEW SYPHILOGRAPHY ON CARDIOLOGY

When Fritz von Schaudinn in 1905 demonstrated in smears from a primary lesion, the *spirocheta pallida*, and when Wassermann, Neisser and Bruck in 1906 gave out a serologic test for a syphilitic tissue, they did a great service to the science of cardiology. For syphilis, as Fordyce says, is a disease of blood vessels. There had been indeed shrewd guesses as to the origin of aneurysm, of aortitis and certain forms of aortic regurgitation, but before 1906 this origin was strictly a matter of debate. Now we know that all cases (for practical purposes) of aortic aneurysm are syphilitic, that a very destructive form of aortitis which may progress to aortic valvular

insufficiency is syphilitic and that several rarer forms of myocarditis and heart block are syphilitic. Such certainty of knowledge has been of great advantage to us, as it has for one thing sharpened our senses for the earliest signs and, by making earlier and earlier recognition of these conditions possible, increased the possibility of arrest by treatment.

THE ORTHODIAGRAPH

In searching for methods to accomplish more and more early diagnosis, the X-ray was pressed into service and by means of a parallel ray recorded on a fluoroscopic screen, the outlines of the heart and aorta have been subjected to a series of measurements which permit us to determine pathologic limits very exactly. The significance of this so far as heart size is concerned, I will refer to below. Here I want to recall the great improvement that has resulted in the diagnosis of aortic and aortitis, confirmation being possible before the advent of any physical sign.

PULSE IRREGULARITIES AND MYOCARDIAL DEGENERATION—POLYGRAPH AND THE ELECTROCARDIOGRAPH

At about the same time as the discovery of the spirocheta there occurred in this particular field an event that is of first-rate importance in any field—a genius appeared. His genius was made known on the publication of his book on "Diseases of the Heart" in 1908. The book was published then but it contained the record of work that James Mackenzie had been doing for over twenty years in a part of the world somewhat removed from the centers of medical research, and where he had incidentally been carrying on a general practice. Shortly after the publication of his book he came down to London; he cut a queer figure there among those superior young men who were popping out of their laboratories and special clinics all over their fingers, to give us a new content of solutions in which the heart had been kept beating for twenty hours. Here we were treated to a study of human beings—on patients, many unsuspecting bright young men, who were benefited by tuberculosis, by a midwife, who makes us believe in the great public health changes in the city of London.

There is a building in the city of London, in the heart of the city, where the famous medical journal, J. W. Further, published the first of the polygraph records, 1921. There stated that the first instrument was the work of the late Dr. T. T. A. Neway.

radial and venous pulses, but it was Mackenzie who showed that it was an important clinical instrument. With it he classified and described all the forms of irregularity of the pulse which we know now, and with the publication of his book on diseases of the heart he was able to show the record of patients with these irregularities, which he had observed over a period of ten, fifteen and twenty years. When a man has observed a series of patients with a definite sign over a period of twenty years he has been able surely to establish the significance and the prognosis of that particular sign. That is clinical medicine at its very best.

In 1903 Eithoven designed another instrument which was destined to play an important part in our study of heart disease—a galvanometer with a string so delicate that it would record, when electrodes were placed on parts of the body, the variations in potential in the heart beat. This instrument, the electrocardiograph, came into general use in 1906. In 1910 the first American papers on its results appeared. It has now a voluminous literature of its own. When it first began to be used it was taken to be valuable because it added a somewhat fuller and more accurate data of pulse irregularities to our knowledge as obtained by the polygraph. It did do this and its use I believe with the introduction of simpler and cheaper forms of the instrument will supplant the polygraph. But it has added something to the polygraphic record in the minute and illuminating information it gives us about the state of the myocardium. The contraction of every part of the heart muscle, the splintering of the R wave, the height of the R, the Q and the S wave, the length of the P-R and the QRS intervals, the direction of the T wave, all give us information we can derive for a certainty, so far as I know, in no other way. Fifteen years ago it was a truism for pathologists to say that myocarditis as diagnosed by clinicians was not found in the dead-house, and for clinicians to say that myocarditis could not be recognized. For the conception of myocarditis, or better myocardial degeneration, affecting equally the whole heart muscle, that is true; but the electrocardiogram has pointed to us the fact that the myocardium is subject to local and focal spots of deterioration brought about by the deposit of focal infection or by patches of atheroma and endarteritis and that if these patches are in the path of the wave conduction impulse of the heart greater or lesser degrees of cardiac failure will result. Note that here again valuable therapeutic lessons are inherent in diagnostic researches.

These researches were given a theoretical framework and indeed the entire physiology of the heart illuminated by the anatomical re-

searches of His, jr., and Stanley Kent in 1892-93 and carried to conclusion by Kieth and Flack in 1907 and Tawara in 1908. These workers demonstrated what may be called "the heart of the heart"—a bundle of nervous and muscular tissue which originates at the mouth of the great veins and spreads out over the heart, penetrating the auriculoventricular septum and dividing into two branch bundles, one distributed to the right ventricle and one to the left. It is the pathway over which the conduction wave of the heart travels and we have found that focal degeneration which happens to alight along a particular part of this pathway gives us some of our gravest and most dramatic forms of myocardial disturbance.

THE NEW GOSPEL OF CARDIAC FAILURE

These findings have opened the way to a brilliant set of investigations upon the physiology of cardiac failure. The measurement of *vital capacity*, the amount of air expired after the fullest possible inspiration, has not only furnished us with the most reliable, quick method of determining the functional capacity of the heart, but has also helped to open the way to an understanding of cardiac dyspnea. The observation of capillaries in the skin at the nail root, first practiced by Lombard about 1912, has revealed characteristic changes for various diseases in the minutest portion of the vascular system. The exact measurement of heart size by the orthodiagraph has caused us to revise, even it may be said to abandon, the older conception of dilatation of the heart. It is impossible even to summarize this most suggestive field of work, the knowledge of the physiology of cardiac failure, but every physician is advised to read the monographs on "Dyspnea," "Cyanosis"⁶ and "Oedema"⁷ published by Williams and Watkins Company; Peabody's Harvey lecture⁸ on "Cardiac Dyspnea"; Pearce's⁹ paper on the "Cardio-Respiratory Mechanism" and Kroghe's little book on the capillaries.

It may be thought that I have emphasized too much the methods of observation that depend upon instruments rather than the use of the hands, eyes, and ears. A word should be said on that point. There is no one who believes more passionately than I do in the training of physicians in physical diagnosis; it is the basis of all clinical medicine. The nineteenth century made great advances in physical diagnosis: so much so that progress was at an impasse. The use of the instruments I have described opened up great new fields in this region, so that after we have learned what the instruments have taught us then we can appreciate physical signs we did not clearly recognize before. For instance, after the anal-

of polygraph tracings we are able to appreciate the significance of pulse irregularities without the polygraph but simply with the finger. This is the highest function of any instrumental method, to educate a sense organ. For a sense organ, such as the finger, is of no value unless it has behind it a brain, and the brain is of no value unless it has understanding.

THE REVIVAL OF LEARNING IN DIGITALIS

Lastly, I wish to speak of the revival of our knowledge of the action of one of the greatest of drugs and certainly the most generally useful of the cardiac drugs—digitalis. The original account which we have of the action of the leaves of the foxglove, that of Withering, is a model of therapeutic writing. Utterly empirical as it was, it was yet grounded on the soundest of practical common sense. Before he wrote his *Withering* proved certain enormously us— the first place, he laid down the exact signs for the exhibition of the foxglove to be given for dropsy with shortness of breath, suppression of urine, and irregularity of the pulse. In the second place he told how much to give—not a measured quantity but enough to produce certain physiologic results—until the urine began to flow, or the pulse became slow, or vomiting set in or a diarrhea was inaugurated. Incidentally he showed that the leaves (he tried the roots, the flowers, and the stalk) contained the active principle, that an infusion was a good method of administration.

in the troubled and we in five years that followed Withering's book. Quinidis had several hang on for . . . During most of the nineteenth century was regarded mostly as a remedy for . . . The pharmacologists then took it . . . hand, as a cardiac drug, and when it may be seen by recalling the . . . men out to students at the . . . We were told that . . . cardiac failure by prolonging the . . . heart and thus allowing the . . . receive more nourishment. The infusion was the best . . . is because it could be . . . we were told that the . . . one drop and that the . . . was even and one . . . that the drug was . . . ergurgitation and . . . raised blood . . . apoplexy from 1890 to 1910 . . . largely by the . . . of the . . . represents. The . . . of the first . . . cause the . . . in . . . be

false by the student as soon as he began to acquire practical experience.

The new day for digitalis dawned in 1911 when Cushny¹⁰ delivered his Harvey lecture on "The Therapeutics of Digitalis and Its Allies." He showed that the action of digitalis applied particularly to the heart in auricular fibrillation and that it did so by causing a physiologic block of the bundle of His, thus protecting the ventricle from the incessant bombardment of the auricular impulses. An enormous volume of literature upon digitalis followed. It has become one of the best known as it is one of the most valuable of drugs. Most of this work has been done upon *patients*, the subject of the clinical syndrome under investigation. Eggleston¹¹ showed us the proper dosage of digitalis, demonstrating that there is no difference in the various preparations in respect of activity but that to obtain the action of the infusion we have only to use an adequate dosage of the tincture or the powdered leaf. Hatcher¹² formulated a method of determining and standardizing the activity of a given specimen. Canby Robinson¹³ has measured the absorption rate, showing that full absorption occurs usually in 6 hours. These are only a fraction of the usable and valuable researches which have had the action or administration of digitalis for their object.

In reviewing this advance in a single branch of our science we have certainly good reason to feel proud. It has given us a body of information which makes cardiology one of the most exact of all the divisions of medicine. In conclusion, it is worth pointing out that with it as a weapon the profession is prepared and has begun to wage a public campaign against heart disease, against its occurrence, against the neglect and mistreatment of the patients who are its victims. The Society for the Study and Prevention of Heart Disease urges all communities of size to establish cardiac clinics for the purpose of admitting cardiac patients, finding suitable employment for them, preventing late lesions by the treatment of focal infections, and the proper treatment of syphilis. Routine examination of school children results in bringing many neglected cases to light. The enormous saving resulting from the campaign against heart disease begun thirty years ago, encourages us to believe that much can be done with the problem of cardiac disease.

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CALCIFICATION IN POSTERIOR CHAMBER OF EYEBALL

REPORT OF CASE

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Miss J. Z., aged 21 years. Family history negative except that grandfather died of tuberculosis at 64 years of age. When 2 years old mother noticed the right eyeball to be smaller than the left and the iris lighter in color. There was no vision except for light. When patient was 13 years old all vision was lost during an attack of malaria. At that time she consulted an oculist who gave her medicine for the eye and prescribed glasses. These she wore for five years at which time she was refitted.

She was seen by another oculist who advised removal of the eyeball. During the last year there has been a loss of weight of eleven pounds. A continuous and aching pain in the eyeball developed about six months ago.

When seen by me there was a violent conjunctivitis with the conjunctiva protruding between the lids. The eyeball was smaller than normal, pupil showed no reaction to light, fundus could not be seen and a yellowish reflection showed in the pupil immediately behind the iris which looked like a foreign body. The iris was a very light gray, much lighter than that of the other eye.

After removal and on section of the ball I found a dark, pigmented, tumor-like growth occupying almost the entire posterior chamber. The growth was hard and irregular, apparently attached to the ciliary body and not connected with the retina or other coats of the eye. No vitreous was discernible.

The laboratory findings showed the coats of the eye normal and the tumor composed of a simple area of calcification.

CHOLECYSTOGRAPHY: ORAL ADMINISTRATION OF SODIUM TETRA-iodo-PHENOLPHTHALEIN

Evarts A. Graham, Warren H. Cole, Sherwood Moore and Glover H. Copher, St. Louis (*Journal A. M. A.*, Sept. 26, 1925), point out that successful cholecystograms can be made by oral administration of sodium tetra-iodophenolphthalein and sodium-tetrabromphenolphthalein. Doubtful results of cholecystography following oral administration should at present be confirmed by intravenous injection. Phenoltetra-iodophthalein also produces good cholecystograms.

CHOLECYSTOGRAPHY

1. Fisher. *Report of the Diagnostic Value of the Sodium Tetra-iodophthalein in the Study of Blood Pressure. Assur. Life Ins. Co. of N. Y.*
2. Lee. *Physiologic Findings in Hypertension. Jour. Am. Med. Assn. Oct. 7, 1911. Vol. LVII. p. 1179.*
3. Ja. *Study of the Causes of Death in*

THE JOURNAL

OF THE

Missouri State Medical Association

JANUARY, 1926

EDITORIALS

REVOCATION OF DR. BRIGGS' LICENSE UPHOLD BY COURT

In revoking the license of Dr. Waldo Briggs, of St. Louis, last March on the charge of bad moral character, the State Board of Health performed a public service by removing from the ranks of the medical profession one who has done all in his power to lower the standards of medical practice in Missouri. His connection with the medical diploma mill was thoroughly established at the trial and later at the hearing in the suit to revoke the charter of the St. Louis College of Physicians and Surgeons, of which he was Dean and owner, when it was shown that persons were admitted to the school without adequate qualifications and given diplomas without having attended the required number of years. At the time of the trial Dr. North, who was then President of the State Board of Health, and other members of the board were doubtful whether the revocation would stand the test of a review of the evidence in the Circuit Court for Dr. North had been advised that the charge of bad moral character was the weakest ground upon which to base the revocation. It now develops that Dr. Briggs was more vulnerable under this accusation, speaking strictly from the legal standpoint, than under any other charge. The decision sustaining the revocation was rendered by Judge Franklin Miller, of the St. Louis Circuit Court, who made no comment upon his ruling.

Judge Miller reversed the order of the board revoking the license in two other cases. These were in the suits of Dr. Archibald M. Ecklund and Dr. Spurgeon H. Barnett, of St. Louis, whose licenses were revoked on the charge of false statements concerning their preliminary and medical education.

In the appeal to the Circuit Court neither the counsel for Ecklund and Barnett nor the counsel for Dr. Briggs denied the guilt of their clients. Counsel for Dr. Briggs argued that the statute providing for revocation of license for bad moral character was invalid. He declared that the term was relative and that it was not within the province of the board of health to determine its meaning. Counsel for Drs. Ecklund and Barnett argued that the board was without authority to revoke

a license because of false statements, asserting that the law provided that the applicant need only show that he had a high school education or its equivalent and that he had received a diploma from a medical school giving a four year course whether or not the applicant had attended the full course.

Apparently the Court concluded that the board of health did not have authority to revoke a license for false statements provided the applicant possessed a medical diploma from a four year medical school.

These decisions were based upon the wording of the statute that omitted the word "reputable" from the medical practice act. Probably it would be more difficult to evade the purport of the law since that word has been restored.

THE POST-GRADUATE ASSOCIATION'S "MEDICAL TACTICS"

During the last few weeks the medical profession of this country has been widely circularized by a somewhat imposingly named concern, the "Post-Graduate Association," at 104 Hills Road, Cambridge, England. The advertising booklet sent out by the "Post-Graduate Association" is a red-covered affair entitled "The Management of Patients." The P. G. A. has for sale two "courses," one on "Medical Tactics," and another on "Therapeutics." Either course alone is offered to American physicians for \$5.50, or both courses for \$10. Those who purchase the course on Tactics must sign a contract not to show it to any one else. While we have not seen the complete course, the syllabus, in the booklet already referred to, is intriguing. The course, it seems, instructs the physician how to so influence patients that they will come back again. It gives suggestions as to the doctor's house, its position, the character of its door and door plate, how the waiting and consulting rooms should be furnished, what instruments should be displayed—for psychic effect—and what instruments should be kept out of sight. It appears from the syllabus that the businesslike doctor must make sixteen impressions on each patient in an ordinary case—sixteen-to-one, 1925 model—and the P. G. A. course tells him how to make them. The single case in which it is judicious for the doctor to laugh at the patient is described. This alone should be worth five dollars. From the syllabus one gets the impression that this course in Tactics is similar in character and scope to the "course" of "lectures" given in American chiropractic factories on "How to Sell Chiropractic," except that in this instance it is applied to medicine instead of Palmerism. In order to lend an air of verisimilitude to an otherwise unconvincing narrative, the P. G. A.

purports to quote "Press Opinions" of ancient vintage from some medical journals published in the British Isles. The leading opinion quoted is credited to the *British Medical Journal* of June 6, 1914. The quotations in this case are so staccato and so obviously separated from the context as to arouse suspicion. Reference to the *British Medical Journal's* original report shows that our British contemporary published a mildly ironical article that was not in any sense the favorable notice that the disjointed quotations lead one to suppose. Inquiry made in Great Britain brings the information that there is no Post-Graduate Association at Cambridge. The address given is that of the printing firm that got out the syllabus already referred to. So far as we can learn, the "Association" consists of a man (not a physician) and his wife who occupy a little office in the building of the printing establishment. It seems, too, that booklets similar to those circulated among American physicians have been distributed among British physicians, the only difference being that the Post-Graduate Association charges the Britishers six guineas (about \$30) for what it offers to the American for \$10. What do you make of that, Watson?—*Jour. A. M. A.*

THE HORTON CASE

Dr. Ray B. Horton, holder of a diploma from the discredited Kansas City College of Medicine and Surgery, sponsor for numerous unqualified applicants for license to practice medicine, who is said to have collected large sums of money to purchase his "influence" in obtaining licenses, escapes punishment. He was indicted for forgery by the Kansas City grand jury and the evidence seemed to prove that he had forged the name of a fictitious person to a certificate of preliminary high school credits. According to the interpretation of the law by his attorneys, this act did not affect the property rights of any person and therefore was not a violation of the law. Judge Southern, of the Criminal Division of the Circuit Court of Kansas City, found that he was compelled to sustain this contention and therefore quashed the indictment. Judge Southern said the act by Horton was reprehensible and should be made punishable by law.

ADCOX NOT GUILTY OF BRIBERY

Dr. Robert Adcox, confessed diploma mill leader, did not violate any statute when he bought false certificates of high school graduation from B. H. Jolly, Superintendent of Public Schools of St. Charles County, says the Supreme Court. Adcox was convicted in the St. Louis courts of bribery and sentenced to two

years in the penitentiary. Judge White, of the Supreme Court, in ruling that Adcox was not guilty of bribery, said that in order to constitute bribery of an official, the bribe must have been offered to induce an official to neglect or omit performance of an official duty required by law. Since it was not within the official duty of Jolly to issue such a certificate, as contended by the state, there could be no bribery of the official, the Judge held.

"Adcox paid for a scrap of paper which, if it told the truth, was worthless for any purpose," the opinion stated. "We are obliged, therefore, to conclude that no criminal offense was stated in the indictment. The Board of Health had no authority to accept the certificate made by Jolly. Doubtless the State Board of Health takes legal advice in such matters and there is no evidence that Adler (Bernard Adler, to whom the certificate was issued) ever presented his certificate to the board. Doubtless Jolly was guilty of making a false affidavit under section 3130, R. S. 1919. In that case his act was unofficial, a misdemeanor, and not the subject of bribery under any statute."

NEWS NOTES

Dr. Noxon Toomey, St. Louis, has returned from an extended trip to Europe and has resumed his practice.

Dr. Frank R. Teachenor, Kansas City, was elected Treasurer of the Western Surgical Association at the annual meeting held in Wichita, December 18.

Dr. Martin F. Engman, St. Louis, was re-elected President of the Missouri Social Hygiene Association at the annual meeting held in St. Louis, December 19.

The appointment of Dr. Howard Fox, New York, as professor of dermatology and syphilology in the New York University and Bellevue Hospital Medical College has been announced by the University Council. Dr. Fox will succeed the late Dr. William B. Trimble who was a member of the medical college faculty since 1898. Dr. Fox is president of the American Dermatological Association, corresponding member of the French and Danish dermatological associations and represented the American Medical Association at the British Medical Association meeting this year and at the Sixth Cuban Medical Conference last year.

The St. Mary's Infirmary, St. Louis, is erecting a new clinic building and a new hospital, to be devoted entirely to charity. The

arrangements have already been completed for the construction of the new clinic building and plans for the new hospital are being organized. The large increase of charity work done by the St. Mary's Infirmary has made it necessary for the sisters to construct these new buildings. At the meeting where the plans were discussed, the speakers included the Rev. Charles Cloud, S. J., president of the St. Louis University, Dr. W. T. Coughlin, chief surgeon of the hospital, Dr. Ralph Kinsella, chief of the department of internal medicine, and Dr. Hanau Loeb, dean of the St. Louis University Medical School, all of whom pledged their support of the work.

An unusual duplication of names has brought considerable embarrassment to the Drs. J. J. Singer. The Dr. J. J. Singer, of St. Louis, has been confused with the Dr. J. J. Singer recently appointed superintendent of Koch Hospital, the hospital for tuberculosis maintained by the City of St. Louis. In the issue of *THE JOURNAL* for December we mentioned this appointment but failed to note that the one who was appointed superintendent of Koch Hospital is not the Dr. J. J. Singer, well known specialist in tuberculosis and Associate Professor of Medicine, Washington University Medical School, who has been a member of our Association for many years. His full name is Jacob Jesse Singer. The Dr. J. J. Singer at Koch Hospital formerly lived in Chicago but has been at Koch Hospital for the past two years. His full name is Joseph Jacob Singer. He is not a member of our Association.

OBITUARY

GEORGE P. KNIGHT, M.D.

Dr. George P. Knight, of Monticello, died in front of his office November 24, 1925. He was born in Monticello, July 29, 1853, being 72 years old at the time of his death. He graduated from the Keokuk Medical College, Keokuk, Iowa, 1876, was a member of the Lewis County Medical Society for many years, of which he was president some years ago. He was county health officer and had quarantined six families in the southern part of the county on the day before his death. He had eaten a fairly hearty breakfast and had been at his office for a few minutes, stopping in front of it to talk to a neighboring business man, when he fell, dying almost immediately. His death was from angina pectoris which had troubled him for some years. The funeral was conducted by the Christian Church and Monticello Masonic Lodge; the burial was at Canton, Mo.

He was married to Miss Eusoxie Howard

in 1879, who survives him. They had one son, Z. T. Knight, born in October, 1880, who also graduated from the Keokuk Medical College and practiced at Monticello for several years before his death on March 23, 1915, while serving as physician in State Hospital No. 1 at Fulton. His father, Zebulon T. Knight, M.D., also practiced at Monticello, later removing to Canton, Mo., where he died many years ago.

J. C. BROWN, M.D.

LARKIN H. CALLAWAY, M.D.

Dr. Larkin H. Callaway, Nevada, aged 70 years, died of cerebral hemorrhage, October 1, 1925. He was graduated from the American Medical College, St. Louis, in 1875, and the Beaumont Hospital Medical College, St. Louis, in 1887.

Dr. Callaway was one of the oldest physicians in Vernon County, having practiced in that community for fifty years. He was the son of Dr. James B. Callaway, a pioneer of Vernon County, and a great grandson of the famous Daniel Boone. Throughout his life, Dr. Callaway was identified with every movement that contributed to the welfare of the people of the county and the growth and progress of commercial and professional life. He exercised a large influence in having State Hospital No. 3 located at Nevada in 1887, and served as superintendent of the institution during the administration of Governor Joseph W. Folk.

His interest in the work of Vernon County Medical Society and the State Medical Association was manifested by his regular attendance at the meetings of both bodies, his genial companionship and attractive personality making for him a wide circle of friends, not only in the profession, but among the laity.

WILLIAM MORGAN CASE BRYAN, M.D.

Dr. William M. C. Bryan, St. Louis, associate professor of Otolaryngology in Washington University Medical School, died October 9, 1925, from cancer, aged 50 years.

Dr. Bryan was the son of Professor W. J. S. Bryan, for many years assistant superintendent of instruction of the St. Louis public schools, and graduated from Central High School in 1893. In 1897, he received his A.B. degree from Washington University and completed his premedical education at Michigan University where he received his A.M. degree in 1898. He attended John Hopkins Medical School from which he was graduated in 1902. He served for three years in the German Hospital at Philadelphia and then entered private practice in St. Louis, specializing in the diseases of the nose, throat and ear. In this field, Dr. Bryan soon became eminent among his

confreres, earning the confidence and admiration of the entire medical profession through his ability and intelligence in his practice.

He was a member of the St. Louis Medical Society and the State Medical Association, a Fellow of the American Medical Association, of the American College of Surgeons and of the American Academy of Ophthalmology and Otolaryngology.

CHARLES H. WINTERER, M.D.

Dr. Charles H. Winterer, St. Louis, a graduate of the National University of Arts and Sciences, 1918, was accidentally shot while on a hunting trip in St. Charles County, December 9, 1925, and died from the effects of the wound a few hours later, aged 32 years.

Dr. Winterer was born in St. Louis and received his preliminary education at the Christian Brothers' College, and after his graduation in medicine he began practicing in his native city. He was active in Democratic politics, being a nominee for coroner in 1924, but was defeated. He was a member of the St. Louis Medical Society, the State Medical Association, and a Fellow of the American Medical Association.

MICHAEL J. DWYER, M.D.

Dr. Michael J. Dwyer, St. Louis, a graduate of the St. Louis University Medical School, 1899, died at his home December 8, 1926, aged 65 years.

Dr. Dwyer gave practically his entire medical career to institutional work. Before studying medicine, he was an employe of the city, and after receiving his medical degree he was appointed resident physician at the Isolation Hospital for Scarlet Fever, which later became Koch Hospital. In 1903, he was appointed superintendent of the latter institution, serving until 1922 when failing health compelled him to relinquish the duties of that office and he was transferred to the Training School for the Feeble-minded, as resident physician. He was a member of the St. Louis Medical Society and the State Medical Association.

ARCHIBALD W. ROBERTSON, M.D.

Dr. Archibald W. Robertson, Lathrop, a graduate of the St. Louis College of Physicians and Surgeons, 1871, died suddenly at his home, October 22, 1925, from a heart attack, aged 79 years.

He was educated in the public schools and at the Gaylord Institute, Platte City, and was graduated from Shelbyville Academy. He first located at Pratherlyville, Clay County, but in 1888 he moved to Lathrop where he soon built up a good practice. Dr. Robertson had the

fundamental principles of medicine well grounded in him which gave him a good foundation from which to work. In typhoid fever and other diseases he often treated by seeing the patient two or three times a week and his cases did as well as those that had a visit every day.

In May, we discovered he had arteriosclerosis which spent itself in cardiac hypertrophy with resultant dilatation. For the past twenty-five years his hearing had been such that he was shut up within himself. He had to give up church worship in the Baptist Church where he had been a life-long member, as well as the meetings of the county medical society. He practically died on his feet as he was walking in his yard when the end came.

J. T. KIMSEY, M.D.

GERMAINE ALEXANDER JORDAN, M.D.

Dr. G. Alexander Jordan, Hospital Commissioner of St. Louis, a graduate of the Medical School of Washington University, 1888, died at his home, November 2, 1925, from cancer, aged 60 years. Soon after his graduation, Dr. Jordan served as vaccine physician in the Health Department. In 1889, he was appointed assistant dispensary physician and in 1895 he was made chief dispensary physician, serving eight years in that position. After that time he entered private practice but in 1908 he was appointed assistant health commissioner, giving his full time to the work, and held that position till he was appointed hospital commissioner in July, 1921.

While assistant health commissioner, Dr. Jordan inaugurated many changes in the department. He was particularly interested in the campaign against smallpox and introduced improved methods of smallpox prevention. He has been credited with being responsible for practically all ordinances regulating the sanitary system in St. Louis. His campaign against medical fakers and illegal practitioners is believed to have been responsible for ridding the city of them.

Dr. Jordan was an Honor Member of the St. Louis Medical Society and the State Medical Association.

BYRON E. FINLEY, M.D.

Dr. Bryon E. Finley, formerly of St. Louis, died in Los Angeles, Calif., August 15, 1925. He was a graduate of the Kentucky School of Medicine, 1897. After practicing medicine for a number of years in St. Louis, Dr. Finley moved to Los Angeles. He was a member of the St. Louis Medical Society, the State Medical Association and a Fellow of the American Medical Association.

BOOKS FOR LEISURE MOMENTS

There are certain books that cannot be reviewed, and this is one of them. Cushing's "Life of Sir William Osler," (Oxford University Press, New York) can only be praised and appraised as a book to be read. It is at once an encyclopedic record and an interesting tale. It would seem that nothing could be left out in this wonderful life, every moment of which is packed with activity, from the 30x40 cottage in the Canadian wilderness to the chapel of Christ Church in stately Oxford. But probably there is no one who came in contact with this great man who could not add the story of some kind deed to this overflowing record. Action, action, and again action. To follow the daily routine of this man is almost to make Theodore Roosevelt look like a lounge lizard. And in his activity, how he kept everyone else he knew going too. Not by driving, but by encouragement. There are living today scores of men, if not famous at least well-known in medicine, who would never have been heard of if it had not been for the constant pricking and encouragement by Dr. Osler.

Packed with detail as these volumes are, one would think nothing had been omitted, but probably every day could be added to by the story of at least another good deed. As, for instance, it is mentioned that in a letter to a friend Osler says he "had a great day at Harvard Medical School, and in the evening sat between the out and the in President." The reviewer happens to know that on that day Osler made three addresses. It was the occasion of the dedication of the new buildings and the crowds could not be contained in the great new amphitheatre. But in between he found time to journey out to a suburb to say a word of cheer to the wife of one of his old pupils who was temporarily in reduced circumstances. And again, although it is not mentioned in the book, we remember how he spent an evening to pay his respects to a little group of men who had gone over to offer their help in the war hospitals early in the game, although at that time he was one of the busiest men in England.

No mention of this work would be complete without paying tribute to Harvey Cushing, the biographer. If the author had been a great literary genius instead of a great surgeon, we would have expected this. Now we can only wonder at the amazing skill shown in weaving into so interesting and thrilling a story the mass of detail that is contained in this great work. Never for a minute do we lose the man Osler in the dry bones of material facts. He is always there, smiling, stimulating, questioning.

Osler's name will not go down in history as

one of the great geniuses of medicine. He was not narrow enough to be a genius. His problems were not limited to the cell as were Virchow's, nor to the micro-organism as were Pasteur's or Koch's, nor to the hidden defenses known as immune reaction as were Ehrlich's and Bordet's. But who will say he was less valuable to medical progress than were these great discoverers, and who will say that his life will be less an inspiration to the coming generation in the field of medicine than the greatest of these?

R. L. T.

The American people seem to go through certain stages such as measles, bridge, Mah-Jongg and cross word puzzles. Now it is Michael Arlen. This young Armenian, still in his twenties, has captured the American people and it seems he cannot write fast enough to satisfy the demand. "Mayfair," a book of tales, (George H. Doran Company, New York), holds the center of the stage. And we must say Michael Arlen improves on acquaintance. Always witty, he has acquired a bit more humor in these short tales, which we are sorry to learn will be his last, for Michael Arlen henceforth will devote himself to novels and plays.

The book, as we know, is of London and of course being in London and through Michael Arlen we meet royalty. The best tale is the last one which is known under the title "Farewell These Charming People." The tale, told by Dwight Rankin to Arlen as they sit over a dry Martini at the Ritz, is the struggle of two society matrons for supremacy. Dwight Rankin, because of his pleasing personality, is becoming tired of being juggled around, as it were, by Lady Surplice and a Mrs. Amp. One tries to outdo the other in parties and when Mrs. Amp is at the height of her success she is swallowed up by some lions—she loved lions—which had escaped from a circus and found their way into her room at the hotel. Lady Surplice is supreme once more and gives a dinner party only to find she has thirteen guests. Sending her butler into the street she demands that he produce a fourteenth guest. He returns with Captain Charity. The dinner progresses nicely until Captain Charity reveals himself as Satan sent from Hell by Mrs. Amp to spoil her dinner party. Satan tells of the success made by Mrs. Amp in the lower regions where she is entertaining Napoleon, Samuel Pepys, Shakespeare, Julius Caesar and others of note. Lady Surplice becomes green with envy when Satan tells her that she has been so good she will go to heaven while Mrs. Amp may enjoy herself with the most charming people down below. One of the guests reminds Satan that Lady Surplice has really killed a lover—bored him to death—and

Satan tells her that was enough to send Lady Surplice to the lower regions. She dies sitting in a chair with a peaceful smile on her face, for she will once more enter the race down below with Mrs. Amp.

The tale ends and Dwight Rankin and Arlen sit gazing into space when a large important woman comes to their table smiling and begging to be introduced to the author. Dwight Rankin introduces her as Mrs. Amp. After she leaves Arlen reprimands his friend for telling him such a tale with no truth to it.

"Oh, Well," said Dwight Rankin. "It might have happened. It may happen. It certainly ought to happen—"

Such are the tales in "Mayfair." Enjoyable reading for many a winter evening for it is a book that can be laid down and picked up when desired. The people in "Mayfair" are interesting and guided by Arlen we get a great deal of enjoyment in meeting them.

People who really want the truth about the Christian Science religion can get it in "The Faith, The Falsity, The Failure of Christian Science" (Fleming H. Revell Company, New York). The authors are men of high standing in their different professions and the incidents brought out make one wonder at the apparent imbecility of the individuals who follow the Eddy teachings.

Dr. Riley, a member of the American Psychological Association, shows just where Mary Baker Eddy derived her ideas and from what source she got her religious system. Mr. Peabody, a member of the Massachusetts Bar and one of the lawyers for Mrs. Eddy's sons in their equity suit, shows with positive truth her methods and her terrible grasping for power and for money. Dr. Humiston, Professor of Surgery in the College of Medicine; University of Illinois, has gathered together numerous cases showing the tragedy resulting from the practice of Christian Science in times of illness.

The book is divided into three parts and makes interesting and instructive reading. The truth about the articles appearing in McClure's magazine in 1907 and 1908 and the quick suppression of the book which followed under the title "The Life of Mary Baker G. Eddy and the History of Christian Science" is here told for the first time by Mr. Peabody, who was closely associated with the incidents recorded.

This book will not perhaps have the wide circulation it deserves, but it should receive just consideration from individuals who want to know above all things—the truth. P. B.

CORRESPONDENCE

SHORT STORIES BY MEDICAL MEN

To the Editor:

I am interested in compiling a collection of short stories written by physicians. As many of these stories are published under assumed names, or the medical degree of the author is omitted, it is difficult to locate them. I am, therefore, writing to ask that of your readers know of any short stories published by medical men, will they kindly communicate the fact to me.

Any information relative to this matter will be greatly appreciated.

HAROLD HAYS, M.D.,
22 West 74th St., New York City.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

Benton County Medical Society, October 10, 1924.

Chariton County Medical Society, December 20, 1924.

Camden County Medical Society, December 29, 1924.

Madison County Medical Society, January 21, 1925.

Montgomery County Medical Society, January 22, 1925.

Clark County Medical Society, January 30, 1925.

Cape Girardeau County Medical Society, February 10, 1925.

Dent County Medical Society, February 19, 1925.

Webster County Medical Society, February 26, 1925.

Ste. Genevieve County Medical Society, March 24, 1925.

Ralls County Medical Society, April 2, 1925.

Caldwell County Medical Society, April 4, 1925.

Taney County Medical Society, April 6, 1925.

Christian County Medical Society, April 15, 1925.

Monroe County Medical Society, April 20, 1925.

Cooper County Medical Society, April 28, 1925.

Morgan County Medical Society, May 7, 1925.

Laclede County Medical Society, May 29, 1925.

Scott County Medical Society, June 20, 1925.

DeKalb County Medical Society, July 21, 1925.

Carter-Shannon County Medical Society, August 24, 1925.

Ray County Medical Society, August 28, 1925.

Platte County Medical Society, September 21, 1925.

Saline County Medical Society, October 15, 1925.

Crawford County Medical Society, October 16, 1925.

Reynolds County Medical Society, November 14, 1925.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY.

One Hundred and Fourteenth Meeting, October 19, 1925

1. OBSERVATIONS ON MEDICAL RESEARCH IN EUROPE.—By DR. H. S. GASSER.
2. REPORT OF THE TOUR OF THE SOCIETY OF CLINICAL SURGEONS.—By DR. M. B. CLOPTON.
3. REPORT OF THE TOUR OF THE INTERSTATE CLINICAL ASSEMBLY IN EUROPE.—By DR. H. S. BROOKS, JR.

One Hundred and Fifteenth Meeting, November 9, 1925

1. GROWTH OF LONG BONES IN DISEASE.—By DR. H. A. HARRIS.

Radiograms were shown of a girl who had three attacks of bronchopneumonia over a period of two years, accompanied in the first case by measles, and in the second case by whooping-cough. The child has never displayed any tendency to rickets, but there is a residual bronchiolectasis with clubbing of the fingers and enlargement of the spleen.

The radiograms show dense lines of bone laid down at the diaphyseal side of the epiphyseal cartilage during the acute illness. Subsequent to the illnesses the normal growth leads to formation of bone on the epiphyseal side of these lines. If the distance between the lines of dense bone laid down at the upper and lower ends of the diaphysis of the tibia at the first illness be observed, this distance remains constant throughout the period of two years. The same holds good for the constancy of the position of the lines of dense bone laid down during the second and third illnesses. This proves that for a period of two years there was no interstitial growth in length of the long bones and confirms the experiment of John Hunter and Duhamel on the growth of long bones.

The relationship of this phenomenon to changes in the hair, nails and teeth during severe illnesses was discussed. The distribution of this condition in the other long bones was considered, especially as regards the actual amount of growth of the shafts of the long bones in a given time, and as regards the effect of physiological activity in determining the persistence or disappearance of these lines of dense bone.

I have seen similar lines in the femur of a still-born in two cases, possibly due to illness in the pregnant mother. I have noted concentric circles in the radiogram of the os calcis and talus in babies and stillborns, suggesting similar variations in the density of the bone deposited. In the case of the bohy epiphyses, I have seen no comparable phenomenon, but I have seen irregularities at the periphery comparable to those which are seen in rickets.

DISCUSSION

DR. ROBT. TERRY: I am sure others as well as myself have been stimulated both by this interesting subject and by Dr. Harris' brilliant presentation of it. It was my good fortune to meet Dr. Harris a year ago in London where I saw the beginning of this study of bone growth and was struck with the possibilities the method offered. Dr. Harris has been able to throw light upon some questions that have

been before us for a long time; viz., the rate of growth of the long bones, and the relative rates of growth of different parts of bone. Observations will be made by others, I am sure, as similar opportunities are presented. There is a question I should like to ask concerning growth of the epiphyses. Were zones of rest and activity apparent in the epiphyses comparable to those described in the diaphysis?

DR. J. A. KEY: I think this is a brilliant demonstration of the relative amount of growth in the various portions of bone about the knee. From clinical experience we know that this epiphyseal growth in the femur is most extensive in the lower end of the bone, and less extensive in the upper portion of the bone. The particular thing that interests me is whether or not this suggests a definite clinical entity or whether everybody who is severely ill and recovers during the growing period has a tendency to lay down these lines of density in the bone. The clubbing of the fingers, present in the case presented, is of course an indication that this child's bones were undergoing an abnormal stimulation over a prolonged period. This clubbing of the fingers is usually accompanied by periosteal over-development in the long bones. I do not know of any case in which it has been noted that clubbing of the fingers is accompanied by laying down of dense bone near the epiphysis.

Another thing is possible, that the nutritional condition of this child had a good deal to do with the laying down of these lines in the bones. The child was probably kept in the house where it could not get sunlight and when very ill took very little nourishment. While it did not have rickets, it did have a good many things that can disturb the process of ossification. In the roentgenograms the lines in the shaft are similar to those seen in the bones of children who have had successive attacks of rickets with incomplete healing between attacks. The blood calcium and phosphorus of this child would be interesting. These transverse juxta-epiphyseal lines of dense bone are also seen in cretinism. It is evident that this laying down of dense lines of calcium salts can be caused by many things. Personally, it is news to me that it follows severe illnesses, and I would like to ask Dr. Harris if, after severe illness, the bones of children usually show changes in the epiphyseal regions.

DR. HARRIS: The number of cases of the presence of these lines in acute illness which we have observed is very small. This suggests that a very severe illness is necessary in order to produce the disturbance in density of the bone. During the two years that this child was under observation, she had sufficient sunshine and codliver oil. There was never any trace of rickets. The child was over average height and weight.

I have seen lines of dense bones in adults with a history of severe illnesses. If they are looked for I am sure that they will be found.

2. FOETAL MONSTROSITIES.—By DR. LEE DORSETT.
3. MASTOIDITIS WITHOUT APPARENT OTITIS MEDIA.—By DR. FRENCH K. HANSEL.

The infrequent occurrence of mastoiditis without apparent otitis media has prompted this report of two cases. Only sixty have been reported. The term primary mastoiditis as it has been designated in the literature is misleading in such cases, since the infection must be primary in the mastoid cells and not secondary to an inflammation in the middle ear that has cleared up.

It is generally agreed that the infection in mastoiditis comes from the nasopharynx by way of the eustachian tube. The involvement of the middle ear may be slight. Access to the mastoid cells is gained through the aditus ad antrum and if this passage is small it is sealed off, leaving no means of drainage for the infected cells, whereas, if the infection is in the middle ear, there may be sufficient drainage through the eustachian tube.

Mastoiditis without apparent otitis media should not be confused with latent otitis media in which there may be no spontaneous discharge of pus from the ear but the ear drum shows pathologic changes and paracentesis is followed by the discharge of pus. In the former the ear drum is usually normal and paracentesis is never followed by the discharge of pus.

In the absence of middle ear symptoms the advent of the mastoiditis may be marked by local and constitutional reactions, in the form of swelling over the mastoid process, fever, leucocytosis and definite cellular destruction of the mastoid as shown by the Roentgen-ray plates.

The outstanding features of these cases are; the anatomic peculiarity in the existence of a small mastoid antrum and aditus ad antrum, and the marked coalescing of the diseased mastoid cells.

The two cases herein reported were 11 and 45 years of age. Both patients had normal ear drums and normal hearing. Earache was present in a mild degree and lasted for a period of about one hour. There had been no discharge from the ear at any time and paracentesis was not followed by the discharge of pus. Both patients had a subperiosteal abscess. The mastoid cells were all broken down into one coalescent mass and in the case of the younger patient there was a thrombosis of the lateral sinus.

The anatomic peculiarity of a small antrum and aditus ad antrum was present in each case.

The danger in these cases lies in the failure to estimate the degree of mastoid involvement. The marked destruction of the mastoid cells increases the possibility of sinus and intracranial complications.

DISCUSSION

DR. L. E. FREIMUTH: I would like to ask Dr. Hansel if there is any previous history in these cases, say 4 or 5 years before?

DR. HANSEL: In the case of the patient 11 years of age there was no history of a previous otitis media. The older patient being a foreigner was unable to give an authentic history. It is possible to conceive of the existence of mild otitis media and mastoiditis without discharge from the ear, which undergoes complete resolution.

Wittmach believes that in cases where there is a small antrum and aditus, a previous otitis media, existing in infancy, interfered with the development of the mastoid cells.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society held their November meeting at Hamilton in the Public Library Building.

Present, Drs. G. S. Dowell, president; Tinsley Brown, secretary; H. H. Patterson, C. H. Wilbur, B. F. Carr, Austin Carr, W. S. Shouse, J. E. Gartside and O. N. Thompson. The visitors were Dr. W. T. Reynolds, of Kansas City, and Dr. P. M. Krall, Professor of Physical Diagnosis in the Medical Department of Kansas University, Kansas City, both of whom were accorded the privileges of the society.

The minutes of the meeting held in Kingston,

October 1, were read and approved. The amendment to the by-laws changing the annual dues from \$6 to \$9 was adopted.

The clinic was conducted by Dr. Krall, and proved very interesting to all present. Six cases of various types were presented. Dr. Reynolds addressed the society on the advantages of a clinic as conducted by Dr. Krall on this occasion.

The following officers were elected for the year 1926: G. S. Dowell, president; C. H. Wilbur, vice president; Tinsley Brown, secretary and treasurer; H. H. Patterson, censor for three years; B. F. Carr, delegate to the State Association; Tinsley Brown, alternate.

The society adjourned to meet in Breckenridge at a convenient time in December.

TINSLEY BROWN, M.D., Secretary.

CHARITON COUNTY MEDICAL SOCIETY

The Chariton County Medical Society met in Salisbury, December 3.

Dr. Wm. W. Fellows, Salisbury, was elected to membership. Dr. R. D. Stratton and Dr. U. S. Buck, both of Rothville, transferred their membership from Linn County Medical Society to Chariton County Medical Society.

Dr. J. D. Brummall, who has been in active practice in Salisbury for forty-three years and a charter member of the Chariton County Medical Society, tendered his resignation as secretary and treasurer of the society, which office he has faithfully and efficiently filled for over ten years. He also withdrew from active membership in the society and was immediately and unanimously elected to honor membership upon the promise that he would attend meetings and take as active part in the meetings as his health will permit.

At the annual election of officers Dr. W. D. West, of Mendon, was chosen president; Dr. R. D. Stratton, of Rothville, vice president; Dr. Ralph M. Fellows, of Salisbury, secretary and treasurer.

A very interesting paper entitled "Heart Disease" was read by Dr. George H. Hoxie, of Kansas City.

The society adjourned to meet in Brunswick the first Thursday in February.

RALPH M. FELLOWS, M.D., Secretary.

MONITEAU COUNTY MEDICAL SOCIETY

The Moniteau County Medical Society met at Tipton, on December 7, 1925. The meeting was called to order by Dr. S. H. Redmon. The annual election of officers was held with following result: President, J. P. Burke, Jr., California, vice president, J. M. Robertson, Latham; secretary-treasurer, G. S. Wilson, Fortuna; delegate, J. B. Norman, Tipton; censors, S. H. Redmon, Tipton, and C. D. Osborne, Otterville.

The resolution endorsing the increase of state dues from five to eight dollars per year was adopted.

The charges of advertising brought against Dr. C. D. Osborne, of Otterville, were investigated by a committee composed of Drs. S. H. Redmon, J. B. Norman and J. P. Burke, Jr. Dr. Osborne introduced evidence to show that reports had been circulated calculated to destroy his practice, and upon his assurance that he had stopped advertising and would not resume it, the committee recommended that he be retained as a member of the society. This report was adopted by the society.

Dr. Burke gave a talk on "The Medical Aspects of Some Disorders of the Thyroid." The discussion proved that the subject was one in which those present had a keen interest.

The society adjourned to meet at California.

J. P. BURKE, M.D., Acting Secretary.

PIKE COUNTY MEDICAL SOCIETY

A regular meeting of the Pike County Medical Society was held in the Elks' club rooms at Louisiana on December 8, with the following members present: Drs. R. L. Andrae, T. G. Hetherlin, C. P. Lewellen, C. D. Scott, J. W. Turner, all of Louisiana; P. P. Burton, New Hartford; R. J. Gay, Bowling Green.

A general discussion of the county society affairs was followed by the election of officers and the following were elected for 1926: President, Dr. Chas. L. Bankhead, Paynesville; vice president, Dr. P. P. Burton, New Hartford; secretary, Dr. John W. Turner, Louisiana; state delegate, Dr. C. D. Scott, Louisiana; alternate, Dr. Chas. P. Lewellen, Louisiana; censors, Dr. E. M. Bartlett, Clarksville, Dr. P. P. Burton, New Hartford, Dr. R. J. Gay, Bowling Green.

The next meeting is to be held in Louisiana, the date to be decided by the president.

JOHN W. TURNER, M.D., Secretary.

PETTIS COUNTY MEDICAL SOCIETY

Pettis County Medical Society held its regular session at Sedalia, December 7, and listened to papers by Drs. Kerwin W. Kinard and P. M. Krall, both of Kansas City, who were the guests of the society. Dr. Kinard spoke on "Surgical Goiter," while Dr. Krall addressed the society on "Clinical Interpretation of Blood Pressure Values." The papers were highly interesting and instructive, and were much appreciated by all in attendance at the meeting.

Officers for the ensuing year were elected as follows: President, J. W. Boger; vice president, John B. Carlisle; secretary, A. L. Walter; treasurer, A. E. Monroe.

Preceding the meeting the members enjoyed a delightful dinner.

JOHN B. CARLISLE, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The St. Louis County Medical Society held its annual dinner and election of officers on Wednesday evening, December 9, at Van Horn's Farm House, and a most wonderful evening was enjoyed by all of the 54 members and guests who attended.

The following members were present: Drs. Otto W. Koch, J. H. Armstrong, H. N. Corley, C. C. Irick, W. F. O'Malley, A. W. Westrup, Horine Miles, P. M. Brossard, C. P. Dyer, E. L. Fredericks, J. A. Prichard, Garnett Jones, J. D. Stolzle. The visitors were: Dr. and Mrs. J. A. Grosskreutz, Dr. and Mrs. R. E. Schleuter, Dr. and Mrs. W. H. Walters, Dr. E. A. Babler, Dr. and Mrs. E. L. Broeker, Miss Koch, Mrs. J. H. Armstrong, Mr. and Mrs. Albert Leschen, Mrs. W. F. O'Malley, Mrs. A. W. Westrup, Mrs. Horine Miles, Mrs. P. M. Brossard, Mrs. E. L. Fredericks, Mr. H. W. Phillips, Mrs. Garnett Jones, Mr. and Miss Mueller, Mrs. C. P. Dyer, Mrs. L. A. Duck, Miss Elizabeth Gittings, Mr. Lawrence Taylor, Miss Elsie Hanson, Judge and Mrs. Wurdeman, Mr. and Mrs. Coats.

The tables were decorated in flowers and festoons were all about the dining room. A splendid orchestra played the latest dance hits from 8 o'clock until midnight, when the party broke up. All declared it was the best annual meeting they had ever attended. The dinner was plenteous and great platters of fried chicken, potatoes, peas, corn and asparagus disappeared before their appetites were satisfied. Favors of fantastically shaped hats were worn by all and added to the hilarity and enjoyment of the dinner.

The dinner was free of any scientific medical talk, and nobody knew there was "a doctor in the audi-

ence." Judge Wurdeman, of the Circuit Court of St. Louis County, gave a short talk, and touched upon the inspiration he has received while upon the bench from the physician as a class, as contrasted with all the quacks and cults who have appeared before him. Dr. Robert Schleuter expressed his appreciation and enjoyment of the many times he has attended the annual dinners.

The society adjourned for a brief executive session for the selection of officers and the transaction of business. The following officers were elected for 1926: President, Dr. J. A. Townsend, Eureka; vice president, Dr. H. N. Corley, Webster Groves; secretary-treasurer, Dr. Clyde P. Dyer, Webster Groves (re-elected); censor for three years, Dr. P. M. Brossard, Maplewood; delegate to the State Convention, Dr. J. H. Armstrong, Kirkwood; alternate, Dr. Horine Miles, Webster Groves.

Dancing was then resumed and enjoyed by everybody until midnight.

CLYDE P. DYER, M.D., Secretary-Treasurer.

WOMAN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.

Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.

Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.

Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.

Treasurer, Mrs. C. T. Ryland, Lexington.

Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.

Chairman of Finance, Mrs. John C. Parrish, Vandalia.

Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.

Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

NOTES

The Southern Medical Association held its annual convention in Dallas, Texas, November 9 to 12, and it was my pleasure to attend, along with some 2300 others.

The entertainments for the ladies were most enjoyable. One delightful feature was an interesting ride under balmy skies, stopping at the magnificent home of Mrs. E. H. Cary for a charming tea. About 500 ladies were present.

The next day, a luncheon was served at the Dallas Country Club, which was followed by a meeting of the Woman's Auxiliary, presided over by Mrs. E. H. Cary, president of the Texas Woman's Auxiliary.

Texas has been organized for eight years and is doing a wonderful work. Mississippi, although in the field but two years, has accomplished a great deal. Among other things, they have raised \$2,000 to establish summer camps at Gulfport for under-nourished and tuberculous children.

When I told them our state had 52 counties organized, with more asking for instructions, great enthusiasm was shown.

It was my first visit to Texas and I came away charmed with the people and the state.

MRS. J. LELAND BOOCHER.

BOOK REVIEWS

A MEDICAL EDUCATION. A Comparative Study. By Abraham Flexner, M.D. New York. The Macmillan Company. 1925.

From the standpoint of relative importance in our educational system today it can be said that medical education commands a leading position.

Abraham Flexner, who for fully twenty years has been closely identified with the American Education Board and The Rockefeller Foundation, and as a student and director of medical education in the United States, is well fitted to make as he has a comparative study of the growth and development of medical education in Europe and America.

The present time demands serious consideration of the very subjects stressed by Flexner in the various divisions of this history of and treatise upon medical education. America is in a transition in medical education. The course supported by our leaders and followed by the student today is most important for social and national welfare.

In a very proper way, Flexner first calls the attention of the American medical profession, and those interested in education to the cultural aim of medicine, making comment "that scientific medicine in America is sadly deficient in cultural and philosophic background." With travel and observation, with international relationships maintained, stimulus and suggestions, the necessary adjuncts for all progress, follow.

Racial, historic and economic development and progress seem to be the order leading up to the higher and cultural sides of mankind. Thus does Flexner prepare for his subject, going among the older European and British peoples and institutions which have a history back of them, a perspective of real and established progress which can be studied and from which inferences can be drawn.

The analysis of these historic, educational institutions bring out the progress in methods and the development of man's capacity in response to his changing environment and increasing needs. Methods must change with any development. New resources and added means come with such development. Such is especially true with medicine and medical practice. With observation and practice there arise the imperative need of specific investigation and thorough research.

This, as brought out by the author, has developed both laboratory and clinic as a part of the armamentarium of the doctor. But with it all the same intellectual attitude has been maintained by research worker and practitioner. The degree of technique, whether in the hand of the competent laboratory investigator or the accurate diagnostician, is always the same. So it should be.

Thus, as accentuated, since "scientific research and practice are the same, medical education must be conceived as primarily the effort to train students in the intellectual technique of inductive science." Fundamentally, as brought out by the author, "education concerns itself with habituation of method." Method, training, habit, repetition, review, the yielding of the tried but impractical or untrue, the testing of the new, and the adoption of the best offered at a particular time, are all comprehended in the ideal training of medical students today.

Flexner cites the German system in his comparison of the methods employed in American institutions. "The German student," he says, "studies or attempts to acquire, for two years, a knowledge of the structure and function of the normal human body. Against this normal background, once learned, he then attempts to place the abnormal." This is

probably the great lesson for the American medical student, and what medical education should be offering and requiring in all chartered schools.

The author systematically investigates and analyzes the types of medical schools throughout the United States; he discusses the need of a general education, the basic sciences fundamental for thorough medical study. Graphically is presented the curricula as offered today in European and American medical schools. Then in detail is taken up a consideration of the conception, equipment and teaching of laboratory sciences. In the same broad and comprehensive way consideration is given to clinics and medical research, the important divisions and phases of each being presented. Finally, as a practical conclusion the "cost" of it all is investigated and explained.

Probably when all is said and done, it can be stated that the change and progress made today in medical education is quite the equal of any department of education either in America or Europe. And the author deserves great credit in this specific and comprehensive treatise, bearing clear testimony to years of intensive, patient and fruitful effort and study on his part.

As a result the standards and ideals of modern medicine should be raised, better qualified medical students should be graduated and public health and welfare should be very materially improved.

S. P. C.

CLINICAL RESEARCHES IN ACUTE ABDOMINAL DISEASE.

By Zachary Cope, B.A., M.D., M.S., Senior Surgeon to Out-Patients, St. Mary's Hospital, Paddington. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$4.00.

This concise presentation is an interesting anatomical and physiological clinical study of the localization of abdominal pain. It deserves the careful study of every internist and surgeon. The significance of the parietal peritoneum with reference to localization of abdominal pain, of muscular rigidity and of cutaneous hyperesthesia is presented in detail, with clinical illustrations. A clinical study is also made of phrenic shoulder pain, and of the differential diagnosis between acute thoracic and acute abdominal lesions. An introductory chapter on the scope of clinical research considers the conditions which must be observed if clinical research is to be of any value.

The volume is worthy of the enthusiastic attention of all medical men interested in the advancement of clinical medicine.

W. B.

PRINCIPLES OF SURGERY FOR NURSES. By M. S. Woolf, M.A., B.Sc., M.R.C.S. (Eng.), L.R.C.P. (London), Instructor in Surgery, University of California Hospital, San Francisco. Philadelphia and London. W. B. Saunders Company. 1925. Price \$3.00.

The increasing demand for service in the field of nursing, and the inadequate supply of carefully trained nurses has made it possible for the so called practical nurse to become more generally recognized, with the result, however, that it has been difficult for those vitally interested in nursing to maintain uniformly the high standards of the profession.

A book for nurses based on the principles of surgery appeals to those who believe in the higher standards of surgical nursing where an intelligent inquiry is made as to the cause and the effect of diseased conditions. It happens only too often that nursing the sick is done in a perfunctory manner and without the basic knowledge of the surgical condition for which the patient is cared for, and under

such conditions the highest type of nursing is not possible.

Bearing in mind the special requirements of nurses, the author strives to point out the causes of the more prominent surgical conditions, to call attention to their most characteristic aspects and the general course of the disease, and to indicate in rather dogmatic fashion the most approved forms of treatment. The book presupposes a general knowledge of the subjects which are usually taught to nurses, and it will be appreciated by the senior student and the postgraduate. The surgical nurse will find in this work much useful information and many helpful suggestions. The author aims to tell a story in a straightforward, simple, and concise manner, and he emphasizes the points he wishes to make by clear explanation and well-chosen illustrations. A nurse should know not only what she is doing but why she pursues a certain course, and the book is an aid in enabling the nurse to take care of her patient more intelligently. At the end of each chapter there is a synopsis which clarifies and systematizes the subject. The synopsis serves as a means of self-review and analysis of the subject and can be used in the preparation of written tests. It should also assist the nurse in cultivating a systematic habit of mind and thought.

This book should perform a distinct service in illuminating the subject of surgery as an aid to intelligent nursing, and should prove of value not only to the nurse but also to the instructor in surgical nursing.

W. C. G. K.

MAN'S LIFE ON EARTH. By Samuel Christian Schmucker, Ph.D., Emeritus Professor of Biology, State Normal School, Westchester, Pa. Author of "The Meaning of Evolution." Macmillan Company, New York, 1925.

This book presents in an authoritative but simple and attractive way the principal facts and theories bearing upon the ancestry of mankind. Since the author has spent the largest part of his life in the teaching of elementary biology he is exceptionally well qualified to interpret in an easily understandable way the more detailed and technical works of anthropologists.

In a short introductory chapter entitled "A Flight of Imagination," the author attempts to orient his reader in time, to place the earth in relation with other planets and with the stars, and to sketch the changing scenes of man's environment through early geologic changes in continents and oceans. Then follows the evidence from the few preserved bony parts of early man and related forms, ancient weapons and implements, utensils and art. A natural transition is made to the evolution of his habits and associations into the life of the family, the tribe and society. The development of religion is shown to be a natural outgrowth of his reverence of the dead as read from countless investigations of burial chambers and ceremonial sites.

Later chapters discuss the present races of men and their probable migrations. Then several outstanding points of embryological evidence of man's development from lower forms are briefly presented.

To round out the survey the question of the continuation of evolution of man is raised and a hint given to an answer in his adaptability and inventiveness.

The final chapter discusses from a sincerely religious viewpoint the difficulty which many people who are early trained in religious beliefs find in accepting the modern concepts of evolution as applied to man.

This book is just what is needed to dispell some of the misunderstandings arising from a too lit-

eral interpretation of parts of the Bible. It should reach a wide circulation under the stimulus of the present controversies over the evolution of man.—E. A.

OLD AND NEW VIEWPOINTS IN PSYCHOLOGY. By Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University, St. Louis. The C. V. Mosby Company. 1925. Price \$1.50.

This book is a collection of five separate papers, of which two are of especial interest to physicians. These are "Mental Measurements," and "Present Day Schools of Psychology."

Underlying the book are some obvious and apparently innocent assumptions, namely that psychology is a science and to be limited by scientific criteria, that it is to be distinguished sharply from metaphysics, and that intuitive beliefs have no place in it.

From these clear limitations the writer proceeds in a logical fashion to sweeping condemnation of much popular "psychology." The second paper in the book, "Present Day Schools of Psychology" contains enough exposive material to destroy most of what passes for psychology in newspapers and magazine articles. Intelligence testers, who are nothing more, character analysts, psychological quacks in industry, enthusiasts in child psychology who explain much more than has ever been demonstrated, behaviorists who are not yet conscious of their own demise, all receive Professor Dunlap's disintegrating criticism.

He pays particular attention to men trained in other fields who speculate in psychology, with what the author thinks are disastrous results. Among them he mentions anatomists and physiologists, like Gall, philosophers like Locke and Dewey, historians like J. H. Robinson, and medical men like Conan Doyle and Freud. One cannot avoid regretting with Professor Dunlap that popular interest in psychology attaches itself mostly to these speculations. E. T. G.

THE WRITING OF MEDICAL PAPERS. By Maud H. Mellish, Editor of the Mayo Clinic Publications. Second edition, revised. Philadelphia and London. W. B. Saunders Company. 1925. Price, \$1.50.

Anyone who writes for publication should have sufficient knowledge of the printer's art to put his manuscript in such shape that it will be easy for the editor to prepare it for the typesetter. This is particularly important for the writer on medical topics. Manuscripts are often laid aside for a long time or even rejected because of the difficulty of deciding just exactly what thought the author desired to convey. Mellish's little book will be a great help to medical writers if they will heed the good advice given.

THE HISTOLOGY OF THE MORE IMPORTANT HUMAN ENDOCRINE ORGANS AT VARIOUS AGES. By Eugenia R. A. Cooper, M.D., Demonstrator of Anatomy and Late Leech Fellow of the Victoria University of Manchester. London: Oxford University of Manchester. London: Oxford University of Manchester. London: Oxford University of Manchester. 1925. Price \$4.00.

A careful study of the thyroid, parathyroid, pituitary, suprarenal and thymus glands, emphasizing histological changes at different periods of life. This work, in clearly defining the range of variation in normal structure, supplies a much needed standard for the comparison of pathological conditions.

E. A.

THE EARLY DIAGNOSIS OF THE ACUTE ABDOMEN. By Zachary Cope, B.A., M.D., M.S., Lond. Senior Surgeon to Out-Patients, St. Mary's Hospital, Paddington. Third edition. London: Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$3.80.

Cope's brilliant monograph upholds the best traditions of British medical literature. The author presents the subject in a manner to convince the reader that he is writing out of his own rich and varied experience as an operating surgeon who is fully aware of the pitfalls that await one who attempts an early diagnosis of the acute abdomen. His style is delightful, clear, concise, forceful and epigrammatic. A few quotations: "It is more important to insert the finger in the lower end than to put a thermometer in the upper end of the alimentary tract." * * * "A normal pulse does not necessarily indicate a normal condition of the abdomen." * * * "More early cases will be diagnosed by palpating the pelvic peritoneum than by palpating the pulse." * * * "Correct diagnosis is the basis of firm counsel."

This life-saving book should be read by every physician, be he specialist or general practitioner. The binding, printing and illustrations are in harmony with the high rank attained by the text.
H. W. S.

MODERN SURGERY, General and Operative, by J. Chalmers Da Costa, M.D., LL.D., F.A.C.S., Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Ninth Edition, Revised and Reset. Octavo of 1527 pages with 1200 illustrations, some in colors. Philadelphia and London. W. B. Saunders Company. 1925. Cloth. \$10.00 net.

DaCosta's Surgery in its ninth edition has proven to be a book of more than 1500 pages with nearly as many illustrations.

When a book has received such commendation as to warrant such republication its character does not require discussion. It is sufficient to say that this popularity is due to the lucidity of its style, its completeness and the general reliability of its teachings. There are few practitioners who do not possess it and but few students who do not know it, or will soon learn to know it.
A. E. H.

REPORTS OF THE ST. ANDREWS INSTITUTE FOR CLINICAL RESEARCH. St. Andrews, Fife. Volume 11. Oxford University Press. American Branch, 35 W. 32d St., New York City. \$3.00.

The second volume of these reports embodies studies under the leadership of Sir James Mackenzie, which seek to unravel the cause of symptoms by applying to symptoms the principle of the reflex arc, and is a continuation of studies inaugurated in the first volume. In the production of a symptom these structures are to be considered: (1) Those which produce the impulse; (2) those which convey the impulse and (3) those which respond to the impulse. The seat of the disturbance which produces the symptoms is not to be found in the structure which exhibits the symptoms. A series of articles present the application of the principle to the interpretation of cardiac signs, the loss of "control" of cellular activity when an element in the reflex is disturbed, the regulating and reflex process, the sensory activities of the skin, the alternating periods of activity and rest in living tissues.

These studies are an outgrowth of Mackenzie's interest in the beginning of disease and the early

functional disturbances which initiate it. It is an attempt to lay the foundation for a study of functional pathology from a standpoint differing widely from accepted methods and based on clinical considerations.

Excellent plates and reproductions illustrate the text.
W. B.

DEVELOPMENT OF OUR KNOWLEDGE OF TUBERCULOSIS.

By Lawrence F. Flick, M.D., LL.D. Co-Founder of the Rush Hospital for Diseases of the Chest, etc. L. F. Flick, publisher, 738 Pine St., Philadelphia, Pa. 1925. Price \$7.50.

This book represents in an encyclopedic way, the knowledge gained of the disease tuberculosis from ancient times up to a few years ago. There is so much abstracted from various authors, especially of those of the early part of the twentieth century, that it represents a composite book compiled by the author.

The first chapters describing the therapeutics used in those days are most interesting and in many ways astounding. Coming to present time, very little is given of today's interpretation, and little is given on the experimental work that is engaging the attention of those interested in this problem. The newer ideas will not be found in the book. It is, however, recommended to those interested in tuberculosis.
J. J. S.

DISEASES OF THE HEART. By Sir James Mackenzie, F.R.S., M.D., F.R.C.P., Director St. Andrews Institute for Clinical Research. Fourth edition. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$9.00.

This, apparently, is the last work of Sir James Mackenzie and it contains many passages which sound very much like the memoirs of a great man. A few extracts may be of help in showing the value of the book.

In the preface he states: "This book is written in the profound conviction that the conception of research which is dominant today is inadequate for the solution of many medical problems."

On page 1 he says: "It may help the reader to understand the main motives which influence the presentation of the matter in this book to make brief reference to the objects aimed at apart from the specific subject of diseases of the heart. These are (1) to recognize the position of medicine among the sciences; (2) to show the need for a new outlook in medicine; (3) to indicate the highest object of medical investigation, namely, the assessment of symptoms; and (4) to simplify medicine by rendering the phenomena of ill-health easy of comprehension by the rigid adherence to fundamental principles."

He shows that, while it is possible to use laboratory methods to study signs and symptoms, yet laboratory methods will not enable us to assess their values. In the same way he shows that medicine can be learned only by experience, and that it has been impossible for the doctor to hand down to his assistant or to his successor, his experience. What he has learned dies with him. In this way medicine has been unsuccessful and he regards the accumulation of real knowledge as a Sisyphean task.

On page 10 he tells why he gave up practice to devote himself to the establishment of clinical research work in the university town of St. Andrews. And he tells, briefly, of some of the things that they have found in their work there.

He complains bitterly that textbooks and teachers have taken up some of his views and have used them as if they had discovered them themselves; without having given him the credit or noted the amount of

work and the number of years he had employed to produce those results. In particular, he speaks of the youthful heart or the extrasystole.

In another place he complains that teaching positions are given to young men who, not having had the experience to know the life history of disease, teach only what they themselves have been taught, and thus hand down traditions which arise in the dark ages and which are hampering the progress of medicine as an art and science.

The technical part of Dr. Mackenzie's book is objective and yet conservative. The new edition, therefore, will be worth while.

He studies the heart as consisting of two parts; the genetic and the muscular systems. The valves or curtains are to him merely appendages to the musculature, and not of primary importance. He evaluates mechanical aids, including the electrocardiograph, as of less importance than the use of the trained senses.

The book is by a man of great experience, writing at the end of such an experience; therefore, it is much more conservative and much more valuable than the work of a young investigator. Dr. Mackenzie, for example, objects to many of the current conceptions of high blood pressure; he objects to some of the plans now in use for the care of heart cases; in general, he would not restrict the life of the heart patient unless it was definitely shown that the origin of the trouble was in the heart. For in his opinion many of the cases showing heart symptoms and treated for heart disease have the origin of their trouble elsewhere than in the heart. In other words, the investigation of the cause of ill-health is to him a real study and one that he feels has not been satisfactorily concluded.

We would recommend the book, both for the young man starting out in practice and for the older man who wishes consolation when he feels that he has not succeeded in carrying out all the plans formed in his younger life.

G. H. H.

FEEDING AND THE NUTRITIONAL DISORDERS IN INFANCY AND CHILDHOOD. By Julius H. Hess, M.D., Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine. Fourth revised and enlarged edition. Philadelphia. F. A. Davis Company. 1925. Price \$4.50.

In this edition the author has incorporated his long and varied experience in the care of infants and children and has added to it the accepted thoughts of the day with reference to the underlying principles which govern pediatric practice. He emphasizes the importance of considering the basal requirements of the various food elements necessary for proper growth and development, giving due consideration to the reactions which these elements, singly and combined, produce in the given child.

The chapters on the Nutritional Disorders of Infancy give us a comprehensive view of the injury that may take place following improper feeding. He emphasizes the effect on the organism as a whole rather than relegating it to the gastro-intestinal system only. He points out that at times the symptoms referable to the latter may be very slight and yet a chronic nutritional disturbance may exist, as evidenced by "lowered immunity, abnormal behavior of the weight curve, alterations of the color and turgor of the skin." As to the proper classification of these disturbances, neither that based on etiology on the one hand nor from the clinical point of view on the other fully meets all the requirements, and therefore, to evaluate properly the important changes that take place he gives due consideration to both.

In the chapter on Ricketts the author stresses the importance of recognizing the early signs and symp-

toms so that preventive measures may be instituted early. The problem is discussed from the point of view of recent chemical and animal experimentation. The literature incorporated is brought up to date of the last publication so that the student has an opportunity of becoming acquainted with the latest findings in this exceedingly common and important nutritional disturbance. Similar thoughtful consideration is given to the subject matter discussed under Scurvy, Infantile Tetany, Acidosis, and the Anemia of Infancy.

The style is clear and there is a continuity of thought which makes the book interesting reading besides incorporating in it a vast amount of useful information.

P. S. A.

DISEASES OF THE BRONCHI, LUNGS, AND PLEURA. By Frederick T. Lord, M.D., Visiting Physician, Massachusetts General Hospital; Instructor in Medicine, Harvard Medical School. Second edition thoroughly revised with the addition of a chapter on pulmonary tuberculosis. Lea & Febiger, Philadelphia and New York. 1925. Price \$8.00.

This treatise represents long experience with pulmonary disease, in a large general hospital, in private practice, the study of a large series of case histories and familiarity with world literature upon the subject up to date.

The value of historical opinion and practice, which are fundamental in diagnosis and therapy, is given first place. But quite as important are noted the more recent advances in methods and more accurate observations, classifications and interpretations of proven clinical signs and accurate laboratory findings.

The new place of "atelectasis," i. e., a collapsed or fetal lung, in physical diagnosis, instances a value of Lord's treatise. The new and established is incorporated and given its proper setting. So might be instanced the subject and real purpose of "rest," secured through artificial "pneumothorax," now recognized as one of the most important curative measures in advanced pulmonary tuberculosis.

Likewise the reader sees bronchopneumonia receive its place of importance, right along with lobar pneumonia, which latter, since the recent influenza epidemic, has been so infrequent in clinical experience. Bacteriology of acute and chronic pulmonary disease, in Lord's work, begins to assume the restricted importance it deserves as a factor in etiology and diagnosis.

The real value of this volume to student and clinician is enhanced because of the conservatism in presenting facts and opinions. Lord makes it clear in the specific field of medicine which he presents that a varied etiology and many factors enter into the cause of pathology and disease, and that improvement or recovery depends upon natural tissue resistance and rational therapeutic means applied to the particular case, by the honest and keenly observant clinician.

Outside of any originality in material or opinion presented, the work deserves most careful study and consideration as a recent publication.

S. P. C.

A MANUAL OF GYNECOLOGY. By John C. Hirst, M.D., Associate in Obstetrics, University of Pennsylvania. Second edition, revised. Philadelphia and London. W. B. Saunders Company. 1925. Price \$3.50.

At this time when the profession is submerged beneath an enormous amount of literature, it is unusual to find a book so thoroughly comprehensive and condensed as the Manual of Gynecology from the pen of Dr. J. C. Hirst. It covers the entire field of both medical and surgical gynecology in a practical manner but is not intended as a reference or student's book.

Until recently the physician who had an elaborate equipment of electrical appliances in his office was condemned by the reputable profession as a quack. Electricity has been developed to the degree where it now has a definite therapeutic value in the form of diathermy, which has been practically treated in this volume.

The late methods of diagnosing and treating sterility by tubal inflation, and the proper use of X-ray and radium, are also given brief discussion and application.

This little volume of five hundred pages would be a valuable addition to any doctor's library.

M. A. H.

TREATMENT OF KIDNEY DISEASES AND HIGH BLOOD PRESSURE. By Frederick M. Allen, M.D. Part I. Practical Manual for Physicians and Patients. The Physiatric Institute. Morristown, N. J.

Allen's treatment is based on the hypothesis that the cardinal symptoms and signs of renovascular disease, i. e. nitrogen retention, edema, and hypertension, may best be controlled by low protein, salt starvation diet. Beside his theoretical discussions, he reports his experiences with 328 cases of renovascular disease concluding that even in severe cases 19 per cent. respond with reduction of blood pressure to normal; 42 per cent. are "subjectively well and remained so," and in 9 per cent. partial or transitory benefit occurred, while in 30 per cent. complete failure is acknowledged.

He insists on the importance of accuracy in controlling the intake of protein and salt and notes the fallacy among many workers in allowing certain foods, for example baker's commercial bread, which as a rule contain salt in excess of one per cent. He affirms that not the source but the total daily amount of protein intake is of paramount importance in control of the condition.

This is a contribution worthy of study and application.

Part II of this text is forthcoming and will deal with the more technical phases of disturbed anatomy and function of reno-vascular diseases. W. A. M.

SURGICAL CLINICS OF NORTH AMERICA. October, 1925. St. Louis number. Philadelphia and London, W. B. Saunders Company.

This number of the clinics will hold special interest for physicians in Missouri because of the large number of cases described which were demonstrated by St. Louis surgeons. Among the numerous cases demonstrated were two rare conditions, one a papiloma of the fourth ventricle successfully removed by Dr. Ernest Sachs. At the time, it was the first case of successful removal recorded in the literature. Another rare condition was a fracture of the larynx, shown by Dr. Roland Hill, which recovered. Dr. Evarts A. Graham exhibited several cases in which the value of cholecystography was demonstrated in diagnosing abnormal conditions of the gallbladder. The book contains 314 pages and is illustrated with numerous photographs and line drawings.

MIDWIFERY MECHANICS. By Lieut.-Colonel Andrew Buchanan, I.M.S., M.A., M.D., Ex-Superintendent Nagpur Medical School. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$2.50.

Written by a man who has never practiced medicine, who in his teaching work has not even demonstrated patients to his students. Surely here is a man whose mind is detached. A man who can study the mechanics of obstetrics alone without being diverted by the thousand things that harass the mind of the clinician. His description of his pivot points is particularly interesting. It is a book intended for

students only but, let us hope, no obstetrician has arrived at the point where he ceases to be a student, therefore, the book will prove helpful to the obstetrician. W. C. G.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

TUBERCULIN INTRACUTANEOUS (Human Type). A preparation of tuberculin-Koch (New and Nonofficial Remedies, 1924, p. 309) marketed in single packages of one intradermal syringe containing 0.00005 C.c. of tuberculin old "O.T."; in packages of five intradermal syringes each containing 0.00005 C.c. of tuberculin old "O.T." and in single vial packages containing tuberculin old "O.T." sufficient for fifty tests. H. K. Mulford Co., Philadelphia.

SQUIBB'S LIQUID PETROLATUM WITH AGAR. A mixture composed of liquid petrolatum—Squibb—heavy (California) 50 C.c.; agar 1.5 Gm.; sodium benzoate, 0.1 Gm.; acacia, glycerin and water sufficient to make 100 C.c. Squibb's liquid petrolatum with agar has the action of liquid petrolatum. It is claimed that the agar by adding bland bulk to the bowel contents, stimulates peristalsis in a normal way and that the combination of liquid petrolatum with agar mixes readily with the feces and softens them. E. R. Squibb and Sons, New York.

MERCUROSAL AMPULES 0.1 Gm. Each ampule contains mercurisal (New and Nonofficial Remedies, 1924, p. 207) 0.1 Gm. in 5 C.c. of distilled water containing 0.1 per cent of sodium citrate. Parke, Davis and Co., Detroit. (*Jour. A. M. A.*, March 7, 1925, p. 751.)

TRYPARSAMIDE. Sodium N—phenylglycinamide—parsonate. Tryparsamide contains 24.6 per cent of arsenic in organic combination. Tryparsamide is primarily a trypanocidal agent and is proposed for use in the treatment of certain forms of trypanosomiasis. Tryparsamide has some spirocheticidal activity and has an unusual power of therapeutic penetration, especially in the case of the central nervous system. This has led to its trial in certain cases of cerebrospinal syphilis. The value of the drug in these conditions, as compared with other methods of treatment, has not been conclusively determined. Tabetic affections have responded less satisfactorily, and patients with general paresis with advanced physical and mental deterioration have shown little or no improvement and the drug may hasten the progress of the disease in such cases. Its use is considered to be contraindicated in forms of syphilis other than that of the central nervous system. The worst of the properties of the drug is a tendency to produce amblyopia. Before using the drug, consideration should be given to the frequent production of visual injury. Tryparsamide may be administered subcutaneously, intramuscularly or intravenously. Powers-Weightman-Rosengarten Co., Philadelphia. (*Jour. A. M. A.*, March 14, 1925, p. 815.)

INSULIN-SQUIBB 40 UNITS. 5C.c. vials containing 40 units of insulin-Squibb (*The Journal, A. M. A.*, Nov. 8, 1924, p. 1509 in each C.c. E. R. Squibb and Sons, N. Y.

RABIES VACCINE (Phenol Killed)—Mulford. The virus is prepared according to the general method of David Semple. It consists of a sterile suspension of the brain tissue of rabbits moribund from the injection of virulent fixed strain of rabies. The virus is killed by the use of phenol and by incubation at

37.5 C. for twenty-four hours. Marketed in packages of 14 doses, each dose contained in a syringe. All the doses are of the same potency. H. K. Mulford Co., Philadelphia. (*Jour. A. M. A.*, March 21, 1925, p. 893.)

ILETIN (Insulin-Lilly) U-80. Five C.c. ampules containing 80 units of iletin (insulin—Lilly) (New and Nonofficial Remedies, 1924, p. 152) in each C.c. Eli Lilly and Co., Indianapolis.

AMPOULES ADRENALIN CHLORIDE SOLUTION Rx 1, 1:1000, 1 C.c. A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117) one part in physiological solution of sodium chloride, 10,000 parts without preservative. Parke, Davis and Co., Detroit.

AMPOULES ADRENALIN CHLORIDE SOLUTION Rx, 1:2,600, 1 C.c. A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117) one part in physiological solution of sodium chloride, 2,600 parts, without preservative. Parke, Davis and Co., Detroit.

AMPOULES ADRENALIN CHLORIDE SOLUTION 1:1,000, 1 C.c. A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117) one part in physiological solution of sodium chloride 1,000 parts, without preservative. Parke, Davis and Co., Detroit.

BENZYL SUCCINATE—MERCK. A brand of benzyl succinate—N. N. R. For a discussion of the actions and uses of benzyl compounds, see *Journal A. M. A.*, Dec. 6, 1924, p. 1864. Merck and Co., New York.

THIGENOL. Solution Sodium Sulpho-Oleate-Roche. A solution of the sodium salts of synthetic sulpho-oleic acid containing 2.85 per cent of sulphur. Thigenol has the actions and uses of sulphoichthyolate preparations (New and Nonofficial Remedies, 1924, p. 350). The Hoffmann-LaRoche Chemical Works, New York.

ERGOTOLE. Extractum Ergotae Liquidum. A liquid extract of ergot containing 19 per cent of alcohol. It is standardized on the uterus of the virgin guinea-pig so that a 1:2,500 dilution of ergotole has the same activity as a 1:20,000,000 solution of beta-aminazoly-ethylamine hydrochloride. The actions and uses of ergotole are the same as those of ergot. Ergotole is also marketed in ampules containing 1 C.c. Sharp and Dohme, Baltimore.

HYPODERMIC TABLETS STROPHANTHIN 1/100 grain—Lilly. Each tablet contains strophanthin U. S. P. 1/100 grain. Eli Lilly and Co., Indianapolis.

HYPODERMIC TABLETS STROPHANTHIN 1/120 grain—Lilly. Each tablet contains strophanthin U. S. P. 1/120 grain. Eli Lilly and Co., Indianapolis.

HYPODERMIC TABLETS STROPHANTHIN 1/200 grain—Scand D. Each tablet contains strophanthin U. S. P. 1/200 grain. (0.325). Sharp and Dohme, Baltimore.

AMPOULES OUABAIN 0.0003 Gm. (1/128 grain)—Lilly. Each ampule contains ouabain crystallized—N. N. R., 0.0005 Gm. in 2 C.c. of a buffered, sterile normal salt solution. Eli Lilly and Co., Indianapolis.

COMPRESSIBLE CAPSULES MERCURY SALICYLATE "SYNTHETIC," 1 grain for Intramuscular Injection. Mercuric salicylate 0.065 Gm. (1 grain) suspended in 1 C.c. of a mixture of benzoinated lard, 67 per cent; peach kernel oil, 31 per cent; camphor, 1 per cent; phenol, 1 per cent Synthetic Drug Co., Toronto, Canada.

COMPRESSIBLE CAPSULES MERCURY SALICYLATE "SYNTHETIC," 1½ grain for Intramuscular Injection. Mercuric salicylate 0.1 Gm. (1½ grain) suspended in 1 C.c. of a mixture of benzoinated lard, 67 per cent; peach kernel oil, 31 per cent; camphor, 1 per

cent; phenol, 1 per cent. Synthetic Drug Co., Toronto, Canada.

COMPRESSIBLE CAPSULES MERCURY SALICYLATE "SYNTHETIC" 2 grains for Intramuscular Injection Mercuric salicylate 0.13 Gm. (2 grains) suspended in a mixture composed of benzoinated lard, 67 per cent; peach kernel oil, 31 per cent; camphor, 1 per cent; phenol, 1 per cent. Synthetic Drug Co., Toronto, Canada. (*Journal A. M. A.*, Dec. 13, 1924, p. 1923.)

NOVASUROL. The double salt sodium mercurichlorophenylxyacetate with barbital. Novasurol contains 33.9 per cent of mercury. Novasurol is used chiefly as a diuretic. It has the advantage over mild mercurous chloride and other insoluble mercury compounds in that it is soluble and may be administered by intramuscular and intravenous injection. The best results have been obtained in dropsies due to cardiac disease. Some authors hold that soluble mercury compounds should be used for their diuretic action, only as a last resort when other drugs have failed. As an antisiphilitic, novasurol has generally been injected intravenously mixed with one of the arsphenamines. Novasurol is supplied in ampules containing 1.2 C.c. of a 10 per cent solution. Winthrop Chemical Co., New York.

BUTESIN PICRATE DUSTING POWDER.—It is composed of butesin picrate (*Jour. A. M. A.*, March 15, 1924, p. 876) 5 per cent. and sodium stearate 95 per cent. Abbott Laboratories, Chicago.

IRON CITRATE GREEN—P. D. and Co.—A complex ferric ammonium citrate, containing ferric citrate equivalent to 16 per cent. of iron and ammonium citrate equivalent to 8.1 per cent. of ammonia. For a discussion of the actions and uses of iron preparations, see New and Nonofficial Remedies, 1924, p. 165. Iron citrate green—P. D. and Co., is intended for intramuscular and hypodermic administration. Iron citrate green—P. D. and Co. is supplied in the form of ampules containing, respectively, ¼ grain, ¾ grain and 1½ grain of the iron citrate green—P. D. and Co. Parke, Davis and Co., Detroit. (*Jour. A. M. A.*, Apr. 4, 1925, p. 1045).

TIMOTHY POLLEN EXTRACT—Swan-Myers.—A liquid obtained by extracting the dried pollen of timothy with a liquid consisting of 67 per cent. glycerin and 33 per cent. saturated solution of sodium chloride. For the actions and uses of allergic protein preparations, see New and Nonofficial Remedies, 1924, p. 244. The preparation is marketed in the following forms: Series I, five vials containing doses Nos. 1 to 5 inclusive. Series II, five vials containing doses Nos. 6 to 10 inclusive. Series III, five vials containing doses Nos. 11 to 15 inclusive. Complete Series, packages containing the fifteen consecutive doses. Swan-Myers Co., Indianapolis.

ALLERGENS-SQUIBB.—In addition to the Allergens-Squibb previously accepted (New and Nonofficial Remedies, 1924, p. 247), the following have been accepted: Bacillus Acne Allergen-Squibb; Bacillus Friedlander Allergen-Squibb; Bean (Kidney) Allergen-Squibb; Cauliflower Allergen-Squibb; Daisy Pollen Allergen-Squibb; Frog Legs Allergen-Squibb; Lentil Allergen-Squibb. E. R. Squibb and Son, New York.

GROUP ALLERGENS DIAGNOSTIC-SQUIBB.—In addition to the group Allergens diagnostic-Squibbs previously accepted (New and Nonofficial Remedies, 1924, p. 258), the following have been accepted: Group Allergens-Squibb Type V (Kidney Bean, Lentil, Lima Bean, Navy Bean, Pea); Group Allergens-Squibb Type XIII (Frog Legs, Lamb, Rabbit, Sweet-

bread, Veal); Group Allergens-Squibb Type XXIV (Corn, Golden Rod, Ragweed, Rye); Group Allergens-Squibb Type XXV (Bacillus Acne, Bacillus Coli, Bacillus Diphtheroid, Bacillus Influenzae, Bacillus Pertussis, Bacillus Typhosus, Gonococcus); E. R. Squibb and Son, New York.

PARATHYROID GLAND DESICCATED—P. D. and Co.—The exterior parathyroids of the ox freed from fat, desiccated and powdered. For a discussion of the actions and uses of desiccated parathyroid gland, see New and Nonofficial Remedies, 1924, p. 224. The product is supplied in the form of tablets containing 1-10 grain. Parke, Davis and Co., Detroit.

Iletin (Insulin-Lilly) U-80, 10C.c.—Each C.c. contains 80 units of Iletin (Insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152). Eli Lilly and Co., Indianapolis. (*Jour. A. M. A.* Apr. 11, 1925, p. 1119.)

PROTEIN EXTRACTS DIAGNOSTIC—P. D. and Co.—In addition to those protein extracts diagnostic—P. D. and Co. previously accepted (New and Nonofficial Remedies, 1924, p. 255) the following have been accepted: Apricot Protein Extract Diagnostic—P. D. and Co.; Cauliflower Protein Extract Diagnostic—P. D. and Co.; Daisy (Ox-Eye) Pollen Protein Extract Diagnostic—P. D. and Co.; Daisy (Yellow) Pollen Protein Extract Diagnostic—P. D. and Co.; Friedlander Bacillus Protein Diagnostic—P. D. and Co.; Lentil Protein Extract Diagnostic—P. D. and Co.; Micrococcus Tetrigenus Protein Extract Diagnostic—P. D. and Co.; Oak Pollen Protein Extract Diagnostic—P. D. and Co.; Paratyphoid Bacillus A Protein Extract Diagnostic—P. D. and Co.; Paratyphoid Bacillus B Protein Extract Diagnostic—P. D. and Co.; Pine Pollen Protein Extract Diagnostic—P. D. and Co.; Streptococcus (Hemolytic) Protein Extract Diagnostic—P. D. and Co.; Streptococcus (Non-Hemolytic) Protein Extract Diagnostic—P. D. and Co. Parke, Davis and Co., Detroit.

GROUP PROTEIN EXTRACTS DIAGNOSTIC—P. D. and Co.—In addition to the group protein extracts diagnostic—P. D. and Co. (New and Nonofficial Remedies, 1924, p. 259) the following have been accepted: Protein Extracts Diagnostic—P. D. and Co. Group 8 [Bean (Lima), Bean (Navy), Bean (String), Pea, Lentil]; Protein Extracts Diagnostic—P. D. and Co. Group 10 (Cabbage, Cauliflower, Lettuce, Parsnip, Spinach); Protein Extracts Diagnostic—P. D. and Co. Group 20 (Colon Bacillus, Gonococcus, Staphylococcus Albus, Staphylococcus Aureus, Staphylococcus Citreus); Protein Extracts Diagnostic—P. D. and Co. Group 21 (Friedlander Bacillus, Micrococcus Catarrhalis, Micrococcus Tetrigenus, Pseudodiphtheria Bacillus); Protein Extracts Diagnostic—P. D. and Co. Group 22 (Pneumococcus Types I, II, and III, Streptococcus Hemolytic, Streptococcus Non-Hemolytic); Protein Extracts Diagnostic—P. D. and Co. Group 23 (Typhoid Bacillus, Paratyphoid Bacillus A, Paratyphoid Bacillus B). Parke, Davis and Co., Detroit.

WHOOPING COUGH VACCINE X PLAIN.—A Bacillus pertussis vaccine (New and Nonofficial Remedies, 1924, p. 320) marketed in packages of four 1 C.c. carpules (tubes) containing, respectively, 500 million, 1,000 million, 1,500 million and 2,000 million killed bacteria per C.c. and in packages of ten 1 C.c. carpules, each containing 2,000 million killed bacteria per C.c. Cook Laboratories Inc., Chicago.

STAPHYLOCOCCUS VACCINE (Combined).—A staphylococcus vaccine (New and Nonofficial Remedies, 1924, p. 323) containing killed Staphylococcus albus and killed Staphylococcus aureus in equal proportions. It is marketed in packages of four 1

C.c. carpules (tubes) containing, respectively, 500 million, 1,000 million, 1,500 million and 2,000 million killed bacteria per C.c.; in single 1 C.c. carpule packages containing 2,000 million killed bacteria per C.c.; and in packages of ten 1 C.c. carpules, each containing 2,000 million killed bacteria per C.c. Cook Laboratories, Inc., Chicago.

STREPTOCOCCUS VACCINE X PLAIN.—A streptococcus vaccine (New and Nonofficial Remedies, 1924, p. 325) marketed in packages of four 1 C.c. carpules (tubes) containing, respectively, 125 million, 250 million, 375 million and 500 million killed bacteria per C.c., in single 1 C.c. carpule packages containing 500 million killed bacteria per C.c. and in packages of ten 1 C.c. carpules each containing 500 million killed bacteria per C.c. Cook Laboratories, Inc., Chicago. (*Jour. A. M. A.*, Apr. 25, 1925, p. 1273.)

METHOD OF RECOGNIZING SCARLET FEVER STREPTOCOCCI

GEORGE F. DICK and GLADYS HENRY DICK, Chicago (*Journal A. M. A.*, March 14, 1925), state that a study of the toxin production of hemolytic streptococci affords a method of recognizing those organisms that are capable of producing scarlet fever. The organism is isolated in pure culture, and grown in plain broth, containing 1 per cent sterile, defibrinated sheep's blood. The authors have been using broth prepared with Witte's peptone, 1 per cent, and Liebig's meat extract, 0.3 per cent. Most scarlet fever streptococci produce toxin in plain broth without blood, but a somewhat stronger toxin is obtained by the addition of a small amount of blood. After incubating for from two to four days, the broth culture is filtered through filter paper and then passed through a Berkefeld W filter. The sterility of the filtrate is determined by culture, and it is kept in the refrigerator. After its sterility is determined, a part of the filtrate is diluted 1: 500 in sterile physiologic sodium chlorid solution. One cubic centimeter of this dilution is mixed with an equal amount of salt solution, and another 1 c.c. is mixed with 1 c.c. of sterile convalescent scarlet fever serum. Both mixtures are incubated one hour, and skin tests are made on a person known to be susceptible to scarlet fever, using 0.1 c.c. of each mixture. At the same time, a control test is made with 0.1 c.c. of the standardized skin test solution used to determine susceptibility to scarlet fever. The reactions are observed at the end of twenty-four hours. The control reaction with the skin test solution should be positive. If the mixture of filtrate with salt solution gives a positive reaction, while the filtrate-convalescent serum mixture gives a negative result, it may be concluded that the organism under consideration is capable of producing a toxin that is neutralized by convalescent scarlet fever serum, and is therefore a scarlet fever streptococcus. Convalescent serums vary in their antitoxin content, and the weaker serums frequently release the toxin after twenty-four hours in the skin; so that the test with the filtrate-serum mixture that is negative at the end of twenty-four hours may be positive at the end of forty-eight hours. In uncomplicated cases of scarlet fever, the hemolytic streptococci usually disappear from the nose and throat during convalescence; but that persons who have had scarlet fever may harbor the specific streptococcus after apparent recovery is shown by the fact that organisms which produce scarlet fever toxin have been cultivated from discharges from sinuses, glands and middle ears after the patients have been released from quarantine.

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ORIGINAL ARTICLES

RADICAL TREATMENT OF TRIGEMINAL NEURALGIA*

WITH A REVIEW OF 71 OPERATIONS ON THE
GASSERIAN GANGLION WITHOUT A DEATH

ERNEST SACHS, M.D.
ST. LOUIS

Facial neuralgia or tic douloureux has become such a satisfactory disease to treat that neurological surgeons are surprised to find how generally medical men still hesitate to recommend operation for the severe type of this disease. The chief reason, of course, is that textbooks on surgery still quote the old figures that come from the days when operations on the Gasserian ganglion were carried out by the general surgeon. Thus, in the Oxford Surgery the figures of Lexer are quoted, who reported 201 operations on the ganglion with a mortality of 15 per cent. and a cure of only 75 per cent. of the cases.

By contrast with these figures, in 1918 Frazier reported 4 deaths in 160 operations and no deaths in 87 consecutive cases and, more recently, in 1925, he reported 156 cases without a death. My own series consists of 71 cases with no deaths. These figures certainly indicate the great change that has been effected in the treatment of this disease. The surgical treatment of the disease has been standardized. Of this and the results I shall speak later in this paper. The question that is of prime importance and to which I first wish to draw your attention is the correct diagnosis of the disease.

There are a number of types of facial pain that may readily be confused with tic douloureux. Not every patient with pain in the distribution of the fifth nerve has a tic douloureux. The pain of a typical tic is paroxysmal, comes in cycles with periods of remission, always is confined to the area supplied by the fifth nerve and does not spread beyond that region. The pain never crosses the

median line, though of course it is possible for a patient to have bilateral tic douloureux. Cold weather frequently brings on a severe attack. Sometimes drinking water or taking food brings on an attack; at other times the paroxysm comes on without any apparent

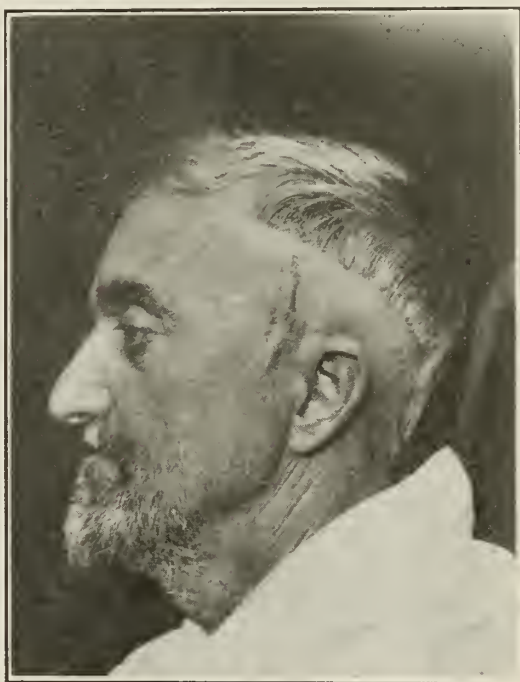


Fig. 1. Type of skin incision. Five days after operation. Very little hair has to be shaved for the operative field; this is particularly important in women so that they are not disfigured for any length of time.

cause. Many of the patients have what are known as "trigger" zones, that is, a spot on the face or on the gums or tongue where the slightest touch bring on an attack. The pains are described variously as knife-like, stabbing, burning, or like an electric shock. Heat more frequently affords temporary relief than cold. The physical examination reveals no objective findings, with the exception occasionally of hyperesthesia. The motor branch supplying the muscles of mastication is never paralyzed.

The conditions that are most frequently confused with true tic douloureux are various

*Read before Greene County Medical Society, Springfield, Mo., Nov. 27, 1925.

types of facial pain due to nasal, so called Sluder neuralgia. The history of these cases is different than that of a true tic douloureux. The pain is more diffuse, does not occur in paroxysms and very often, in fact usually,



Fig. 2. The area of sensation lost over the face and forehead extends from the black line in this picture to the median line shown in Figure 3. Sometimes normal sensation extends farther up on the cheek than shown in this case.

spreads beyond the area supplied by the fifth nerve, sometimes behind the ear or down the shoulder.

There are atypical tics which are very difficult to diagnose; in these cases the most effective method of differentiating these obscure cases is to inject one of the affected branches with alcohol. If the injection stops the pain, it undoubtedly is a tic douloureux. If injection of a branch does not give relief, cocainization of the sphenopalatine ganglion, as devised by Sluder, may stop the pain and as a rule proves that the case is one of sphenopalatine neuralgia.

The nasal neuralgias, however, are not the only conditions which simulate tic douloureux. The other conditions are inflammatory conditions about the face and jaws, infected or impacted teeth, tumors of the jaws or gums, retropharyngeal tumors, or intracranial tumors pressing on the Gasserian ganglion—so called Gasserian ganglion tumors. All these must be considered and excluded before a diagnosis of tic douloureux can be made. None of these are difficult to recognize when once thought of, with the exception of the Gasserian ganglion

tumors. Some years ago I reviewed these cases and set down the symptoms and signs that were characteristic and differentiated the condition from tic douloureux. These were: Constant pain in the distribution of the fifth nerve, pain not occurring in paroxysms; paralysis of the motor branch of the fifth nerve; anesthesia or hypesthesia in the distribution of the fifth nerve.

Before resorting to an operation on the posterior root of the ganglion, which always remains a formidable operation even if not dangerous as it formerly was, the surgeon must satisfy himself, even after he has decided that he is dealing with a trigeminal neuralgia, whether the disease is severe enough to warrant the radical operation or whether palliative measures are indicated. No hard and fast rule can be laid down on this matter.

I use but two methods of treatment, either alcohol injection, or the radical operation on the posterior root of the ganglion. I do not believe in any of the peripheral extractions of the nerve; they are disfiguring, are only palliative, and often do not afford nearly as much or as long relief as do the alcohol injections. When but one branch is involved, an alcohol injection should almost always be tried first. As a result of a satisfactory injection, the patient has numbness of the area supplied by the nerve injected. This numbness is the same, though not as extensive, as the anesthesia after



Fig. 3. The motor root has not been destroyed and patient opens his mouth in median line; no deviation of the jaw to one side.

a ganglion operation. It is well for a patient first to become familiar with this numbness, otherwise they may find the numbness following a radical operation very annoying. I have at times done the radical operation where but one branch was involved, either because of the patient's intense suffering and desire to be permanently cured, or because the patient grew tired of repeated alcohol injections and wished permanent relief, or because of living so far away that they could not return for other injections. In but one or two instances has it been my good fortune to give permanent relief by an alcohol injection; as a rule the pain returns within one to two years.

The operation on the posterior root of the ganglion has replaced the earlier operation of removal of the ganglion itself. It is somewhat easier, requires a smaller exposure and, as pointed out by Spiller and Frazier, who first carried out the operation, accomplishes all the removal of the ganglion did. It has, furthermore, certain advantages, for it makes it possible to save the motor branch of the fifth nerve, thus avoiding paralysis of the muscles of mastication on one side, which does not in any way interfere with mastication but at times annoys particularly sensitive patients; and secondly, very recently a slight technical improvement has made it possible in selected cases to save the fibers of the ophthalmic division, thus avoiding anesthesia of the cornea. This I feel, however, is a very questionable procedure

as pain may develop in the first branch when the other two have been destroyed.

Though this operation has practically no mortality, there are post-operative results that may be very annoying, and it is well to keep

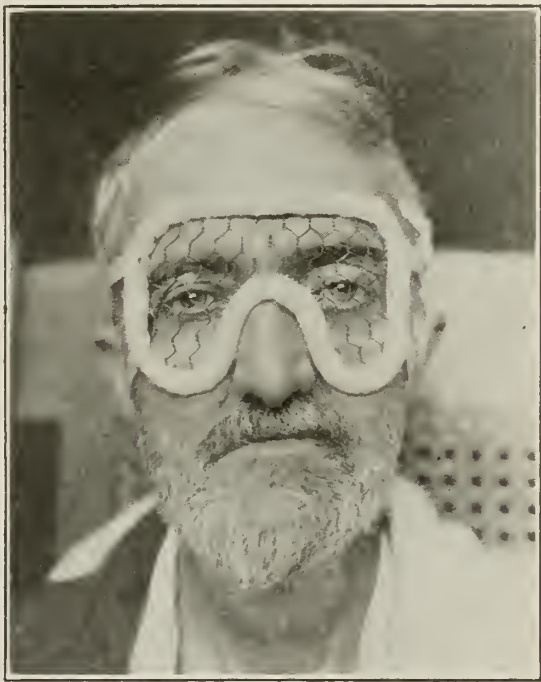


Fig. 5. Method of protecting the patient's eye after operation so that there is no chance of patient touching the anesthetic cornea which is most frequent cause of corneal ulcer. Mask worn for several days after operation and at night for 2 to 3 weeks.



Fig. 4. Area of anesthesia when the ophthalmic division has not been removed. Corneal sensation retained.

these in mind. Any one who has seen the fearful suffering of a patient with major trigeminal neuralgia would suppose that any discomfort would be readily borne if the pain is gone, but we all forget past pain quickly, and the discomfort of the moment is always more prominent.

Some of these patients, after operation, are annoyed by the numbness of their face, which is an inevitable accompaniment of the operation. It feels "wooden," or "thick," or at times they say it feels "crawly." The vast majority of patients very soon grow accustomed to this, but occasionally a patient is much annoyed. There is nothing to do for this, and a patient should always be told beforehand of this and the other post-operative possibilities.

A much more serious complication occasionally occurs, namely, paralysis of the facial nerve with consequent inability to close the eyelid. This has happened to me four times in my series. Fortunately the facial nerve recovered in all four cases, but during the period of recovery the eye is in a very precarious condition. The cornea is anesthetic as a result

of the extirpation of the fifth nerve, and a corneal ulcer is almost unavoidable. Occasionally a corneal ulcer develops even when there has been no facial paralysis. These ulcers may be difficult to heal, and the cooperation of an

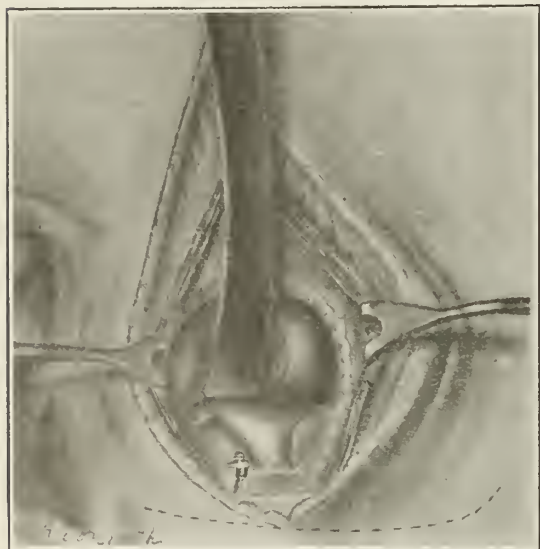


Fig. 6. Shows the dura retracted; middle meningeal artery has been clipped with a silver clip, the third root of the ganglion exposed, still covered with dura.

ophthalmologist who understands the problem is necessary. It has been my experience that the most effective way of treating such a corneal ulcer is to close the eye by drawing the upper lid down and to avoid all irritating eye washes. Normal salt solution or boracic acid is all that should be used. Saving the ophthalmic division of the fifth nerve obviates this complication, but I hesitate to do this, as in trying to separate the fibers to the first division one may leave some second division fibers, and leaving any of those fibers means a continuance or recurrence of pain. Besides, if certain simple precautions are followed patients will have no trouble. The precautions are these: First, having the anesthetist keep the eye covered so that no ether fumes come in contact with the cornea; second, covering the eye at the end of the operation so that the patient cannot touch his anesthetic eyeball; and third, instructing the patient how to wash out his eye with salt solution in an eye cup to remove any irritating particles that he could not feel because of the anesthesia of the cornea. If these precautions are neglected, a patient may injure the eye permanently and even lose the sight of that eye.

Some surgeons operate with the patients lying down while others prefer them in the sitting position. Personally, I prefer doing the operation with the patient lying down. A few surgeons use local anesthesia but most neuro-

logical surgeons use general anesthesia. I have never seen any harm from the general anesthesia. My patients all sit up in bed the next morning and often leave the hospital in seven days after operation. The operation has to be done deliberately and if troublesome bleeding is encountered, as occurs in a certain number of cases, progress may be slow and difficult. It is a trying operation for the surgeon, so why make it also trying to the patient by making him go through the added ordeal of knowing all that goes on about him? I have used local anesthesia in a few of these cases but find no benefit to the patient and have therefore discarded it.

Following complete extraction of the posterior root the patient loses pain, temperature, and touch perception, but this loss is not over the entire area supplied by the fifth nerve, especially over the area supplied by the third division, as there is considerable overlapping here by the cervical nerves and consequently the patient continues to feel quite normally over the middle of the cheek. In some of my earlier cases this disturbed me as I feared I had left some third division fibers and I re-operated, but in every case I found that I had removed all the fibers. This accounts for the fact that in the table the number of operations exceeds the number of cases by six. Although pain, temperature and touch perception are lost, it must be emphasized that some sensation remains, namely, deep pressure sense, in the

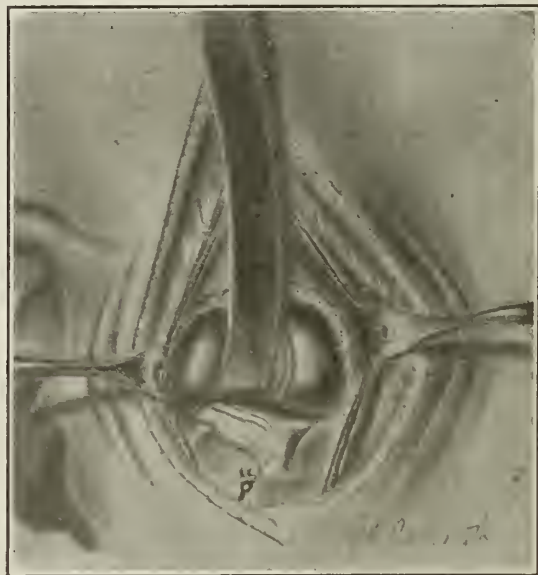


Fig. 7. Dura over Gasserian ganglion has been incised and the posterior root of the ganglion has come into view. Towards the mesial side the ophthalmic portion of the root is seen. Sometimes this lies as an entire separate group of fibers; more frequently it is part of the entire root so that there is danger of leaving some second division fibers consequently it is safer to remove the entire sensory root.

entire area supplied by the fifth nerve. This form of sensation is carried through the seventh (the facial) nerve which of course is undisturbed in the operation. A sensory examination by one not familiar with this fact

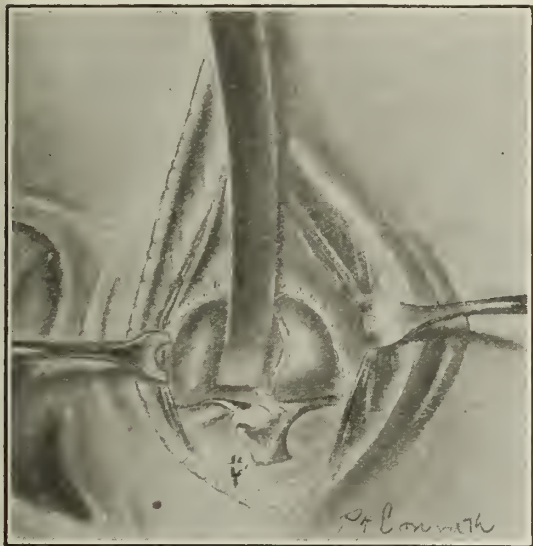


Fig. 8. The sensory root has been extracted and turned forward over the ganglion. The motor root is left intact.

may result in the erroneous conclusion that all the fibers of the fifth nerve have not been removed.

TABLE 1.—Analysis of Cases

<i>Trigeminal neuralgia:</i>	
Total number of cases.....	145
No. surgical measures taken	38
Alcohol injection	42
Extraction of posterior root of Gasserian ganglion	65
 EXTRACTION OF POSTERIOR ROOT OF GASSERIAN GANGLION	
65 cases	71 Operations 0 Deaths
<i>Operation:</i>	
For tic douloureux	63
For Gasserian ganglion tumor	2
<i>Initial pain:</i>	
Pain began in second division	42
Pain began in third division.....	13
Pain began in first division.....	7
Not stated where pain began.....	3
<i>Duration of pain:</i>	
Varied from 7 months to 40 years.	
<i>Age Incidence:</i>	
Between 20 and 30.....	3
Between 30 and 40	6
Between 40 and 50	9
Between 50 and 60	16
Between 60 and 70	20
Between 70 and 80	5
Between 80 and 90	2
Not recorded	2
Ganglion tumors	2
<i>Sex:</i>	
Males	36
Females	29
<i>Location:</i>	
Right side	36
Left side	26
Not stated	3
Motor root saved, cases.....	12
(10 of these in the last 30 cases)	
<i>Complications:</i>	
Facial paralysis	4
Corneal ulcers	7
(2 severe, 1 lost eye through neglect)	
Cases not relieved	3
(2 wrong diagnosis, 1 required subsequent sphenopalatine operation to get complete relief)	

Pneumonia and empyema	1
Operation discontinued because of excessive hemorrhage	1

If the diagnosis of trigeminal neuralgia has been correctly made, the radical treatment invariably gives relief. In the vast majority of cases the patients are satisfied and tremendously pleased with the relief they have obtained. A few find the numbness or paresthesia annoying, but this is so rare that I have no hesitation in recommending this procedure for the treatment of major trigeminal neuralgia.

519 University Club Building.

STATUS LYMPHATICUS*

REPORT OF TEN CASES ASSOCIATED WITH SUDDEN DEATH

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There is no organ within the human body that has been so neglected, despised, shunned, and condemned, even by physiologists and endocrinologists, as the thymus gland. From its past reputed evanescence shortly after birth, and from its close proximity to many vital parts—so near and yet so far—we know less about this gland than any other member of the endocrine group.

PHYSIOLOGY AND ANATOMY OF THE THYMUS

Sajous believes that the gland is put in the body to manufacture and distribute the phosphorus needed in the body structures. In the paper of Garretson¹ he is quoted as stating: "The thymus supplies to all tissues the excess of phosphorus in organic combination (possibly as nucleins) required during the development of the body to build up its cell nucleins."

Williams,² who concurs in this belief, quotes Sir Edward Shaefer as saying: "The functions of the thymus are more obscure than those of most of the endocrine organs; indeed there is room for question, whether it should be included among these bodies. But the mutual relations which appear to be established between it and the male generative glands, perhaps entitles it to occupy a place among them."

McAuliff³ says, "The thymus, like the thyroid, does not seem to be intimately connected with sexual characteristics, but does have some association as it is persistent in eunuchs. Possibly like the pineal it has a limited prepuberal function."

Another explanation generally given is that the gland regulates or controls the deposit of lime in the bones.

*Read before the Annual Inter-County (Central Missouri) Meeting of the Boone County Medical Society, Columbia, Missouri, June 10, 1925.

We were taught not many years ago that this gland was essentially a fetal or prenatal organ which at birth immediately began to atrophy from disuse, to disappear completely within two or three years. Today we recognize in the thymus a gland, variable in size which, far from disappearing in the first years of life, maintains a more or less physiological normal size or in some cases increases in size but within rather strict limits up to and even beyond the age of puberty. Normally, at or before this period of life, the gland begins to atrophy. This atrophy is presumably never so complete that the gland is prevented at a later time from increase in size by hyperplasia or hypertrophy. In the abnormal cases, those of status lymphaticus, we have reason to believe that the gland does not decrease in size at any time but remains stationary, ever and anon indulging in one of its periods of volcanic-like activity, which have been described by Williams² as its concertina-like excursions.

Anatomically this gland overlies some of the most important structures in the body, such as the arch of the aorta, the common carotid arteries, the right auricle, sometimes the base of the right ventricle, the innominate vein, the phrenic nerves, the vagi and laryngeal nerves, the middle and inferior ganglia of the sympathetic system, the esophagus, and the trachea with its bifurcation. The gland occupies what has been termed the "critical space," the superior opening of the thorax. This space lies between the manubrium sterni in front and the vertebral column behind (seventh cervical and first dorsal vertebrae), and in young infants measures not more than 2 to 3 cm. in its anteroposterior diameter. In the usual normal development of the body, the bony cage forming the boundaries of this critical space grows at a greater rate than does the thymus. Upon this fact and normal development depends safety. If to the contrary the gland increases at an unusual rate, or if it becomes swollen from edema, inflammation, or other causes, danger becomes eminent.

DEFINITION

Status lymphaticus (status-thymico-lymphaticus, lymphatic constitution, lymphatism, constitutional inferiority) has been best defined by Symmers⁴ as "a combination of hereditary constitutional anomalies, entering into which are certain peculiarities of configuration, with preservation or even hyperplasia of the thymus at an age when involution is to be expected, hyperplasia of the lymphoid cells in the lymph nodes, spleen, intestine, and elsewhere, hypoplasia of the cardiovascular system, development deficiencies in the genitalia, and incidentally, visceral defects of uncertain oc-

currence and irregular distribution." The condition sometimes is terminated by sudden death, usually in children but occasionally in young adults and not rarely in mature adults.

Paltauf⁵ in 1889-1890 pointed out the symptom-complex and showed that the enlarged persistent thymus is but one of a combination of anatomical imperfections occurring in the same body, constituting the condition which is now universally recognized under the term status lymphaticus.

CLINICAL ASPECTS

Commencing in 1905, Dr. Charles Norris,⁴ Director of Laboratories at Bellevue Hospital, made a series of observations on certain peculiarities of configuration in status lymphaticus and called attention to their importance in the clinical detection of the condition. In addition, he pointed out the frequent association of status lymphaticus and certain lesions of the ductless glands, including goitre, Addison's disease, acromegaly, and the like, together with its occurrence in suicides and others of unstable emotional qualities.

"Most abnormal children have abnormal endocrine glands, and when one of these glands is out of rhythm, the whole orchestra becomes jangled and out of tune, and each member expresses its discord by an enlargement."² The condition, status lymphaticus, is an example of the closely allied relationship of these glands. The thymus enlarges, the spleen and general lymphoid tissues become enlarged, presumably as an attempt on their part to assist the thymus, or to overcome or neutralize some substance formed in excessive quantities by the enlarged persistent, or perverted thymus. It is quite certain that the leading part of this gland travesty of status lymphaticus is played by the thymus, and that were it not for thymus enlargement there would be no such condition. It is a condition of "everybody out of step but Johnnie." To quote Symmers,⁴ "The child with an enlarged thymus is typically the child whom our grandfathers called the scrofulous child, the 'angelic child' of the elder Gross."

The condition as such is compatible with life; in fact, many subjects not only attain maturity but survive the involutional and atrophic changes that eventually occur and deprive the condition of its greatest dangers. Remaining, even in these cases, is a menace of an increased susceptibility to infections, particularly those which enter through the lymphoid tissues of the pharyngeal, faucial, and intestinal groups. We know that in these areas, the pharynx and head of the colon, are the greatest accumulations of lymphoid tissue and the most marked concentration of bacteria at any point in the body. A second menace to these individuals lies in the

possibility of sudden death, or months of invalidism from the weak, underdeveloped cardiovascular system. This hypoplasia renders the organs of this system, and incidentally all organs and tissues, through nutritional and circulatory disturbances, particularly the brain and myocardium, vulnerable points when faced with sudden demands, i. e., high arterial tension, and degenerations, with the associated further damage to the heart and these vessels.

CLINICAL SIGNS AND DIAGNOSTIC FEATURES

"Accompanying status lymphaticus are several clinical signs and manifestations which are generally considered to be typical of that condition. In the clinical conglomerate of scrofula the elder Gross (*about 1876*) recognized the 'angelic child,' in whom he pointed out the existence of a so-called lymphatic constitution, and theorized the connection between it and an unusual susceptibility to tuberculosis, particularly of the bones, joints and lymph nodes. It is now known that children of this type belong to the category of status lymphaticus. "The angelic child' may be described as delicately molded but beautifully proportioned, blue eyed or brown, with long lashes, finely chiselled features, transparent cheeks and rapid mutations in coloring, thin lips, smooth, velvety skin and silk-like hair, shapely limbs and quick, graceful movements, narrow waisted, mentally alert, often precocious, a thing of beauty, but lacking in the full promise of life."⁴ Such children are not even reasonably assured of maturity, but are liable to be eliminated by sudden death from trivial injuries, mild diseases, tuberculosis, meningitis, fright, shock, or one of the many other inconsequential factors which have been met with in sudden deaths in this class of patients.

"The 'angelic child' is a well known picture, but we must remember that it is not all thymic children who are as attractive as this. Some of them are ugly, sluggish mentally and physically, coarse featured and sometimes rachitic, but even these retain the fine velvety skin and shapely limbs. The first, 'the angelic child,' is generally a girl and associated with the enlarged thymus, there is an enlargement of the thyroid gland which accounts for the picture of this type of child. The second, the dullard, is usually a boy with an inactive thyroid and its concomitant tonsils, adenoids, and nocturnal enuresis."²

After puberty the clinical recognition of status lymphaticus is even easier. The usual picture is of a delicate texture of the skin, which may be velvety to the touch, dead white, or faintly cream colored, sometimes lusterless or paste-like, but rarely muddy; at other times it may be swept by a faint delicate iridescent

sheen or appear like a ripe peach under the June sun; well nourished, often muscular, finely proportioned body with its gracefully outlined arms, slender waist, round and arching thighs. In addition to these, in the male there is seen a distribution of the pubic hair similar to the female, the penis often small and the glans acorn shape, the hair on the face and in the axillæ scant, and the thoracic hairs are scant or totally absent. In the female subject status lymphaticus is more difficult to recognize by simple body inspection, but there is always present the unusual delicate texture of the skin, an accentuation of the graceful molding and outlines of the body, a scanty growth of hair in the axillæ, and frequently a growth of hair upon the lips and face.

In the negro race much the same picture as above given is found. In addition, in this race much more commonly than in the white is associated frequently a magnificent degree of muscular development. (Case No. 3.)

It is of vital interest to consider the possibility of status lymphaticus if any of the above described clinical signs are present. The danger accompanying the condition is too great to consider the diagnosis of the disease with little or no interest. Such individuals should have every benefit applied to them that is known in the realms of preventive medicine. They are poor risks, are a menace to themselves and those with whom associated, particularly in epidemics. They, therefore, should be thoroughly protected against typhoid fever, smallpox, diphtheria, and tetanus, by artificial immunization; and so far as possible from other infectious diseases by every available means of sanitation, isolation, etc.

CHLOROSIS

Williams² attributes chlorosis, a disease now commonly thought to be due to some endocrine disturbances having to do with assimilation and storage of certain foods, to status lymphaticus. Virchow and Paltauf previously conceived of there being some interrelation between chlorosis and status lymphaticus in girls. It is a well known fact that "the lily of languorous virtue, the chlorotic girl, when properly treated and nourished by assimilable foods is converted into a mischievous maiden of vicious potentials in whom the lillies and languors of virtue give place to roses and ruses of guile."² These beneficent results are attributed to the fact that the endocrine equilibrium is restored and the thymus is caused to return to its back seat and the other glands become more dominant in their control. In chlorosis the anatomical signs and symptoms indicate that this type of anemia when associated with status lymphaticus is merely an incidental condition. One

must admit that there may possibly be more than a trivial coincidence when we recall the hypoplasia of the heart, of the aorta, and frequently of the genitalia, and the fine delicate skin, with its rapid mutations of coloring seen in chlorosis.

STATUS LYMPHATICUS DEATHS IN THE BIBLE

In Acts⁶ we find what I now interpret to be the earliest recorded deaths from status lymphaticus. Quoting from this Biblical record, we have the following: "But a certain man named Ananias, with Sapphira his wife, sold a possession, and kept back part of the price, his wife also being privy to it, and brought a certain part, and laid it at the apostles' feet. But Peter said, 'Ananias, why hath Satan filled thy heart to lie to the Holy Spirit, and keep back part of the price of the land? While it remained, did it not remain thine own? And after it was sold, was it not in thy power? How is it that thou hast conceived this thing in thy heart? Thou hast not lied unto men, but unto God.' And Ananias hearing these words fell down and gave up the ghost; and great fear came upon all that heard it. And the young men arose and wrapped him around, and they carried him out and buried him. And it was about the space of three hours after, when his wife, not knowing what was done, came in. And Peter answered unto her, 'Tell me whether ye sold the land for so much.' And she said, 'Yea, for so much.' But Peter said unto her, 'How is it that ye have agreed together to try the Spirit of the Lord? Behold, the feet of them that have buried thy husband are at the door, and they shall carry thee out.' And she fell down immediately at his feet, and gave up the ghost; and the young men came in and found her dead, and they carried her out and buried her by her husband."

INCIDENCE

In 5,652 necropsies at Bellevue Hospital⁴ there were 457 cases of status lymphaticus (8 per cent.). In an analysis of 249 of these cases, 212 were in males and 37 were in females, which is the proportion of about 6 to 1. In this same group only 25 cases (slightly less than 1 in 10) occurred in negroes. In this group of cases the disease was distributed over the following age periods:

Under 1 year.....	22 cases
From 1 to 10 years.....	10 cases
From 11 to 20 years.....	20 cases
From 21 to 30 years.....	62 cases
From 31 to 40 years.....	57 cases
From 41 to 50 years.....	41 cases
From 51 to 60 years.....	19 cases
Over 60 years.....	11 cases

In my group of 10 cases associated with sudden death, only one case occurred in a negro (10 per cent.) and 8 of the group (80 per cent.) were males. Age incidence, the youngest was 6 months and the oldest 46 years of age.

In records from all countries there has been a remarkable association of status lymphaticus in individuals showing evidences of mental derangement or deficiencies, particularly with that group showing suicidal intent. Emerson⁸ found that in 1000 cases of mental defective males, 220, or 22 per cent., showed most if not all attributes sufficient to identify them as cases of status lymphaticus. Bartels⁷ studied 122 cases of suicide and out of 52 cases found status lymphaticus sufficiently marked in 80 per cent. to be definitely recorded. Miloslavich¹³ in 110 cases of suicide among soldiers found 80 per cent. to be definite cases of status lymphaticus.

PATHOLOGY

The anatomical variations in status lymphaticus includes the external features of configuration and development which have been above enumerated, and in addition there are in other parts important changes which may be classified and described under the following groups: (1.) The thymus gland. (2.) The lymphoid tissue. (3.) The cardiovascular system. (4.) The genitalia. (5.) Incidental anomalies of development.

Thymus gland. It is considered that normally the thymus gland does not weigh more than 8 grams. Howland⁹ found the average weight of the gland in 495 patients under 5 years of age to be from 4 to 6 grams. Greater weight than 8 grams I consider to be indicative of one of the prime anatomical findings of status lymphaticus. I have not found a gland to weigh more than 45 grams, but in the literature there are a number of glands reported as weighing around 70 grams, one as much as 135 grams.¹⁰ One case reported, that of a child who died suddenly at 8 hours of age, had a gland weighing 70 grams. As a contrast the same writer (Symmers⁴) reports a second case, an acromegalic individual, 38 years of age, in whom the gland weighed 70 grams, and whose death was due to an intercurrent infection.

Lymphoid tissue. Depending upon the condition of the lymphoid tissue, we have two anatomical types of the disease, 1, status lymphaticus; 2, recessive status lymphaticus. The former is associated with marked changes in more or less all of the lymphoid tissues of the body. The faucial, lingual, and pharyngeal tonsils; Peyer's patches and solitary intestinal follicles are particularly involved. The last

two are found to be hypertrophied in about 90 per cent. of the cases. The mesenteric, axillary, inguinal, cervical, and tracheobronchial lymph nodes are usually enlarged. In two cases I found a marked enlargement of the lymph nodes at the hilus of the liver and near the head of the pancreas. In both cases there were definite symptoms of obstruction to bile flow, evidenced by jaundice. The spleen may be normal in size, small or enlarged. The lymphoid follicles of the spleen are prominent and hyperplastic in more than 90 per cent. of the cases, even including those cases in which the spleen may be smaller than normal.

Recessive status lymphaticus is used to designate that group in which the lymphoid changes are trivial or absent.

The changes in the *cardiovascular system* are present in a high percentage of cases and these changes are seen as hypoplasia of the heart, of the aorta, and of vessels in other parts of the body. The prominent arteries and their branches in some organs, particularly the brain, have thin, underdeveloped walls. Due to the narrowness of the aorta, the left side of the heart is often found hypertrophied or dilated.

The *genitalia* of both sexes usually show well marked hyperplasia.

Incidental anomalies are not uncommonly seen as supernumerary lobulations of the lungs (Case No. 10), supernumerary splenic notches (Cases No. 5 and 8), accessory spleens (Cases No. 1 and 6), unusual branches of blood vessels (Case No. 5), patent foramen ovale (Case No. 5), and other similar usually unimportant though interesting developmental anomalies.

HISTO-PATHOLOGY

Certain findings in tissues from patients having status lymphaticus which are associated with sudden death will be briefly described without attempting to go into the detailed minute histopathology of all organs.

Thymus. There have been in my specimens no outstanding histological findings in this gland. In practically all of the glands examined from status lymphaticus cases there has been found an increase of the lymphocytes more or less throughout the gland. In one gland from the series here reported was extensive edema, evidenced by clear unstained vacuoles within the cytoplasm of the cells and by the marked cellular separation, with the intercellular spaces containing a smooth, clear, homogeneous, slightly pink staining material (Case No. 5).

Lymph nodes and spleen. Findings in lymphoid tissue generally coincide with those reported by Symmers.⁴ Sections have been made from all lymph nodes and spleens. They have

almost invariably shown a marked hyperplasia of the germinal follicles with a broad band or collar of increased numbers of lymphocytes surrounding these follicles. Likewise it has been found that the peculiar focal necrosis of the central portion of the germinal follicles has been almost constant. This focal necrosis closely resembles the type seen as a complication of severe toxemia; for example, that following extensive burns. Evidences of repair of these necrotic foci have been seen in most sections. This manifestation, termed evidence of repair, is seen as concentric whorl-like collections of spindle cells resembling young fibrous tissue cells. These somewhat resemble the whorl-like arrangement seen in dural endotheliomata. In the lesions of status lymphaticus, however, there are to be seen in many such areas large, mononucleated, polyhedral cells of light staining cytoplasm, and somewhat larger than the cells among which they lie. These are interpreted as being endothelial cells, which have arisen either from small vessels or the reticulo-endothelium of the organ. The cytoplasm of the fibroblastic and endothelial cells takes a pinkish eosin stain which causes the areas where they are present to resemble a pink nest egg surrounded by a heavy zone of blue lymphocytes. Symmers⁴ classifies the first of these cells as spindle connective tissue elements and the second group of cells, designated by me as endothelial cells, he interprets as degenerate large lymphocytes. He states that he does not hesitate to make on the spleen or lymphoid tissue a microscopic diagnosis of status lymphaticus from these findings. Symmers⁴ credits the original description of these changes to Lartigau. Later they were again described by Blumer. Lartigau¹⁰ quoted in Blake's paper credits Oertel with having described earlier a similar lesion in the lymphoid tissue in diphtheria. Blumer¹¹ says, "The lesions very closely resemble those seen in various infections, and differ we believe only in degree, degenerative changes being much more marked in case of bacterial infection."

Liver. In the usual case of status lymphaticus I have no outstanding, unusual or characteristic findings in the liver. In cases Nos. 5, 6, 8, 9, and 10 there were found, however, extensive fatty changes in this organ. The changes were so marked in case No. 9 that it was extremely suggestive of phosphorus poisoning. Chemical findings did not substantiate this belief. Histological sections of the liver from these cases showed extensive fatty degeneration and some fatty infiltration, which were more or less equally distributed throughout all zones of the liver lobules. From the fact that in some of these cases there were massive enlargements of lymph nodes at the

hilus of the liver and near the head of the pancreas around the common bile duct, these findings of fatty changes are looked upon as being in part the result of the disturbance in the flow of bile from the organ. General tissue jaundice was present in case No. 9.

CAUSES OF SUDDEN DEATH

Since the first conception of the disease and the association of enlarged thymus gland with sudden death there have been many theories promulgated as to the direct cause of death. Of them, only three are at present given serious consideration. The oldest of these is that which places the cause upon pressure, pressure being exerted upon the trachea, the base of the heart, the great vessels of the neck, or the nerves which pass through the critical space. In cases of sudden edema or swelling of a persistent thymus this possibility cannot be denied. This is particularly true in infants and in the early years of childhood when the diameter of this critical space is not more than 2 to 3 cm. Necropsy findings in other organs indicating asphyxia corroborate this belief in so much as it applies to disturbances of respiration by its pressure upon the trachea. The second theory, that advanced by Paltauf⁵ is that the sudden death is the result of cardiac paralysis. The most recent theory and the one which is given greatest acceptance is that advanced by Symmers¹² in 1917. According to this investigator, there is a protein (auto-genous) poisoning of the system, resulting from repeated showers of necrosis of the lymphoid follicles, flooding the system with split protein products and thereby leading to a tissue sensitization. This theory, which amounts to the belief of an anaphylactic reaction, readily accounts for most cases of sudden death in status lymphaticus.

The various conditions under which sudden thymic deaths have been recorded are, bathing, general and local anesthesia, operations (often trivial), flogging, coitus, mental excitement, burns, fright, boxing, wrestling, ordinary walking, from a dash of cold water, and even rest. The writer has examined the bodies of status lymphaticus individuals dying suddenly during electrical storms, during minor setting up physical exercises in grade schools, from the introduction of needles for suturing wounds, from spasmodic crying, from croup, from whooping cough, and from the fright of seeing a tree felled.

DIAGNOSIS

To remove, so far as possible, the menace which is ever present in status lymphaticus individuals and to diminish the death rate from this disease, it is imperative that the condition

be recognized clinically as early in life as possible. The general signs and symptoms enumerated under the picture of the "angelic child" and of the dullard and those of after puberty should ever be borne in mind and when such are met with the possibility of the disease and its incident dangers must be considered.

To these may be added a high piping, girlish voice, frequently seen in the male, particularly about the age of puberty, and a deep full bass voice often encountered in the female.

Confirmatory findings upon which positive diagnosis frequently can be made are to be obtained in most cases by anteroposterior with lateral X-ray pictures or by fluoroscopic examinations in the same positions..

TREATMENT

The only treatment of direct benefit to these patients would be that of the X-ray, radium, or internal administration of iodides over a prolonged period of time. It is because of the promise of relief by the first two of these named agents that we should endeavor to make a diagnosis on these patients before some untimely, unsuspected, unnecessary interruption of life occurs. The chief result following the use of the X-ray and radium is the bringing about of involuntary and atrophic changes of the thymus. Concerning the actual usage of these agents, I claim no expert knowledge. From literature and from personal reports by competent workers, I can testify to the benefits secured upon many patients by placing them in the hands of skilled workers with these physical agents.

The improper and unskillful use of radium and X-ray therapy upon the thymus has resulted, in some instances, in damage of the parathyroids and thereby have defeated the aims of the treatment and brought discredit to these agents. When properly used with the necessary screening, there should be no such unfavorable results.

In impending danger a certain amount of relief may be obtained by the position known as ventral or facial decubitus. To derive the benefit of all possible room in the critical space, the patient should be required to adopt the exaggerated stoop or ventral decubitus with the head sharply bent forward, face directed downward, and chin resting upon the sternum.

The pharmacopeia carries nothing in its battling array worthy of discussion so far as its effects upon status lymphaticus is concerned, except adrenalin and the iodides. Adrenalin unquestionably is of benefit when employed in acute edema. Unfortunately, death has usually occurred before the physician or the treatment has reached the bedside of the individual. In

the absorption and removal of fluids and exudates in tissue spaces or cavities, the iodides do play an important part, but we must recall that this is a slow process. To meet the demands of prompt relief in status lymphaticus, the iodides would hold the same place as a child in the cradle when a man capable of shouldering the gun and facing the enemy is needed. Iodides administered over prolonged periods of time as an absorbent, and because of their specific action upon glandular tissues, will play an important part in bringing about the desired retrograde changes in a persistent or hypertrophied thymus. If not entirely causing involution and atrophy of the gland, they may at least cause it to become again a passenger on the ship rather than a pirate ready to take life at any time upon the slightest provocation.

CASE REPORTS

Case 1. Necropsy No. 20-3. Baby V. H., white, male, 6 months of age. Private case examined at request of family. Bottle fed from birth. During life a blueness about the face and hands was noted; otherwise there were no abnormal signs or symptoms. During a period of spasmodic crying, mother left the child in a crib and went to the kitchen to prepare a feeding. Upon returning to the room within ten minutes time she found the child dead. *Necropsy findings.* Thymus gland weighed 32.5 grams, was definitely wet and edematous; spleen enlarged, follicles prominent; accessory spleens (four); mesenteric, tracheobronchial, cervical, axillary, and inguinal lymph nodes hypertrophied.

Case 2. Necropsy No. 21-1. Mrs. —, white, female, 35 years of age. Deceased, sitting at a sewing machine, had her attention suddenly attracted to an unusual sound and arising from the chair to an erect position saw a tree being felled by workmen in front of her window, but across the street. Throwing her hands upward she fell backward dead. *Necropsy findings.* Thymus gland 35 grams; spleen approximately normal in size, but follicles were unusually prominent; the lymph nodes of the mesenteric, tracheobronchial and cervical groups were enlarged and their follicles prominent. Heart and other organs revealed no lesions that could in any way be interpreted as causes of death.

Case 3. Necropsy No. 21-4. Negro boy, 15 years of age. Service of Dr. L. W. Dean, University Hospital, Iowa City, Iowa. Operated upon for removal of hypertrophied tonsillar and adenoid tissue. Boy was extremely frightened prior to being taken to operating room and after return to his bed following the operation. Fifteen minutes after being in his bed and after talking with the nurse on duty and telling her of a premonition of death, he suddenly died. *Necropsy findings.* Thymus gland, 34 grams; spleen, mesenteric, tracheobronchial, axillary, inguinal, cervical, and retroperitoneal lymph nodes at the base of the sacrum were enlarged and the follicles prominent. Peyer's patches were prominent. The physical development of this boy was marvelous. The muscles of the pectoral group, the biceps, the triceps, the muscles of the forearm, and those of the limbs, stood out as prominent ridges.

Case 4. Necropsy No. 22-7. Miss M. Y., white female, 13 years of age. Private practice of Dr. W. P. Dysart, Columbia, Missouri. Family history of no importance. Personal history: Had been healthy throughout life except for the usual diseases of childhood from which she promptly re-

covered. During the past year she had fainted several times, once while horseback riding and on this occasion fell from the horse but with no injury. She had not menstruated. Parents stated that the girl was always a very quiet, home-like individual, who never participated in any violent exercise and did not enjoy the usual rough and tumble games of her playmates. She was very excitable and became restless and nervous upon slight cause. She had little or no ambition and had not developed as has her sister and brother. The mother considers that the child was backward in development and mentality. On October 12, at 3:30 p. m., during the usual school drill or physical exercise in which the pupils were required to go through a maneuver known as "squat and hop," the deceased made two such hops and was called to by the teacher to hold her head more erect and throw it backward when she hopped. She did this at the next hop and fell backward from the squatting position dead. *Necropsy findings.* Absence of hair development in axillary regions, unusual growth of hair on sides of face, masculine type slender chest, masculine type extremities, narrow pelvis; thighs from the perineum to the knees nowhere touching, to the contrary there was a slight bowing of these parts; hypertrophy of thymus (43.4 grams); recent discrete tubercles, left pleura; hypoplasia of aorta; passive dilatation right ventricle; stenosis aortic valve; hypertrophy of thyroid; hypertrophy of spleen with hyperplasia of its follicles; infantile type uterus (hypoplasia); hypertrophy of inguinal, axillary, cervical, tracheobronchial, mesenteric, and retroperitoneal lymph nodes; and bilateral multilocular cystic ovaries. *Histological findings.* Increase in yellow elastic fibrous tissue in the wall of the aorta with a decrease in muscular tissue, follicular necrosis with hyperplastic lymphadenitis, follicular necrosis with hyperplastic follicular splenitis, hypertrophied Hassall's corpuscles and hyperplasia of lymphoid and endothelial cells of thymus, colloid goiter, chronic passive congestion spleen and lungs.

Case 5. Necropsy No. 23-18. Mr. E. W., white, male, 32 years of age. Service of Dr. Dudley A. Robnett, State Hospital No. 1, Fulton, Missouri. Patient, an employee in the hospital, had suffered for months with a marked toxic goiter. Three weeks ago, under local anesthesia, left thyroid artery was ligated. Upon the date of death the right lobe of the thyroid gland, under ether anesthesia, was enucleated and removed. During closure of the wound, the patient partially came from under the anesthetic and during the introduction of the needle for the last skin suture, the patient died. *Necropsy findings.* Underdeveloped musculature; edema tissue lower pole of neck anteriorly; hypertrophy epitrochlear, submental, mesenteric, retroperitoneal, tracheobronchial, lateral, anterior and posterior cervical, solitary intestinal follicles, Peyer's patches, and mediastinal lymph nodes; incompetent aortic valve, active dilatation left ventricle, passive dilatation right heart chambers, patent foramen ovale, relative insufficiency mitral valve (4.5 cm. increased circumference), relative insufficiency tricuspid valve (4.3 cm. increase circumference), chronic endocarditis aortic valve leaflets (mild degree), chronic localized mural endocarditis right ventricle; congenital anomaly, three mouths to left coronary artery; hypoplasia of aorta, chronic pulmonary tuberculosis, hypertrophy of spleen with hyperplasia of follicles, congenital anomaly, supernumerary splenic notches; chronic passive congestion of liver and spleen, fatty degeneration of liver, parenchymatous nephritis, absent right lobe of thyroid, severed and ligated right thyroid blood vessels, hypertrophied left lobe of thyroid (exophthalmic goiter), thrombosis left thyroid artery, persistent and hypertrophied thymus (42 grams after fixation), edema

and hemorrhage into adjacent tissue and capsule of thymus. The thymus, 13 cm. long, 5.3 cm. wide, and 1 to 2 cm. thick, hung down over the ascending aorta and base of the heart covering the first portion of the transverse arch of the aorta. At its upper pole the gland, its capsule and adjacent tissues were soft, pulpy, edematous and blood stained.

Case 6. Necropsy No. 24-3. Baby A., white, male, 12 months of age. Private practice of Dr. S. D. Smith, Columbia, Missouri. Sudden death occurred during an attack of croup. A diagnosis of status lymphaticus, confirmed by X-ray pictures, had previously been made by the attending physician because of the definite signs and symptoms of the "angelic child." *Necropsy findings.* Hypertrophied tracheobronchial and mesenteric lymph nodes, hypertrophy of spleen with hyperplasia of follicles, accessory spleen, fatty degeneration of liver, and persistent hypertrophied thymus (18 grams after fixation by embalmer's fluid).

Case 7. C. H., white male, 10 years of age. Private practice of Dr. J. E. Thornton, Columbia, Missouri. Necropsy was not permitted. Previous history of no value. Died suddenly while standing by a desk in a school room during a thunder storm. Examination of body revealed no signs or evidences of external injury of any type. The body presented the typical appearance of the "angelic child," the superficial lymph nodes were readily palpable, the spleen was palpable and the splenic notch prominent.

Case 8. Necropsy No. 24-14. White, male, 46 years of age, insane inmate (maniacal type) of State Hospital No. 1, Fulton, Missouri. Service of Dr. M. O. Biggs. Sudden death occurred during a thunder storm. An attendant saw the patient, who was standing in the middle of his room when a crash of lightning occurred near by, fall to the floor dead. *Necropsy findings.* Hypertrophied mesenteric and tracheobronchial lymph nodes; chronic bilateral tubercnolosis, tracheobronchial lymph nodes; multiple petechial hemorrhages of epicardium, relative insufficiency tricuspid and mitral valves, simple hypertrophy left and right ventricles, hypertrophied spleen with hyperplasia of follicles; congenital anomaly, four supernumerary splenic notches; fatty changes in liver, nontoxic goiter, persistent and hypertrophied thymus (26.3 grams). Thyroid gland approximately 3 times normal size, almost completely encircled the trachea.

Case 9. Necropsy No. 24-24. P. M., white, male, 8 years of age. Private practice of Dr. R. S. Battersby, Columbia, Missouri. Deceased first seen by attending physician 24 hours prior to death. The chief complaint was irregular pains in the right upper abdominal quadrant. The skin, conjunctivæ and mucous membranes were jaundiced. At no time was rectal temperature above 99 degrees F. Consultation was had and a tentative diagnosis of acute hemorrhagic pancreatitis was made. The child at the time was considered critically ill. When seen early in the morning on the day of death, the family was told that the child would probably live through the day. After putting on coat and gloves and reaching the door to leave the house, the physician was called back with the statement that the child was dead.

Necropsy findings. Intense jaundice of conjunctivæ, mucous membranes, skin, and all organs of the body; general lymphadenitis with hypertrophy of posterior and anterior cervical, submental, axillary, inguinal, epitrochlear, tracheobronchial, retroperitoneal, mesenteric, and lymph nodes along the bile ducts and at the hilus of the liver; petechial hemorrhages in pleuræ and pericardium; cardiac hypertrophy, hypoplasia of aorta, hypoplasia of aortic valve orifice, hypertrophy of spleen with hyperplasia of follicles, partial stenosis of pancreatic and common bile ducts by masses of hypertrophied lymphoid tissue, extreme degree fatty degeneration of liver,

parenchymatous nephritis, biluria, albuminuria, cylindruria, hypertrophied Peyer's patches and solitary intestinal follicles, multiple petechial and ecchymotic hemorrhages in capsule of a persistent and hypertrophied thymus (28.5 grams).

Histopathology. Spleen. Marked degree hypertrophy of splenic corpuscles. The parent germinal cells were markedly increased in number as were the younger lymphocytic cells, which formed broad collars or zones around the germinal centers. In the central area of most of the germinal follicles were zones of focal necrosis. Around the margin and in some instances invading the zones of necrosis were endothelial-like reticulated cells, and intermingled with these were young fibrillated fibroblasts. The necrotic zones with their invading and surrounding above described cells stained a definite shade of pink, these with their loose textural arrangement, in most instances resembling whorls, sharply delimited them from, and contrasted them to the surrounding zones of densely packed small blue stained lymphocytes.

Liver. Extensive areas of necrosis involved in places as many as ten to twelve lobules in ill-defined zones where there were no living liver cells. In these areas were strands of skeletal remnants of fibrous tissue. There was a perivascular grouping of red blood cells and lymphocytes. In the zones of necrosis bile channels remained intact and thin wall new formed bile channels were abundant. The lobules showing the least damage had dilated central veins surrounded by a narrow zone of central necrosis. The peripheral zones of the least damaged lobules were marked by extreme fatty degeneration verging into necrosis. Disintegration of liver cells and cords seen in all zones of the liver lobules was most marked in the peripheral. Lobules intermediate between those nearest normal and the extreme finding of necrosis showed all stages and phases of fatty degeneration, cell disintegration and necrosis. Bile pigment, intra and extra cellular, was present in all areas. The histological picture of this organ as a whole closely resembled that of an acute yellow atrophy undergoing repair with formation of numerous thin wall bile capillaries. The gross picture and the clinical history were against such a condition.

The gross and microscopic findings corresponded to the changes in the liver described by some authorities as hepatic cirrhosis frequently found as an associated lesion of status lymphaticus. Such an interpretation was here made.

Case 10. Necropsy No. 25-2. B. H., white, male, 5 years of age. Service of Dr. Dudley A. Robnett, Boone County Hospital, Columbia, Missouri. Case of sudden death of undetermined cause following minor operation for removal of foreign body (needle) in left knee. Needle was accidentally introduced into the knee one month prior to operation. For a period of 48 hours after operation the patient's condition was considered almost perfect. Then without warning or cause there was a sudden crisis associated with fright, followed by sudden death, with no definite clinical findings to account for it.

Deceased had been an unusual type of development of a definite configuration and skin, with its appendages completing the picture of a rotunded girlish figure. Parents stated that the boy had been frequently taken for a girl. Mother stated that at times during the child's life and particularly when the crisis came on, prior to death, she had noticed at intervals an enlargement above and arising from behind the manubrium sterni. She stated that this swelling or enlargement would rise during the child's periods of screaming and crying but would quickly disappear after each period of exertion ceased. As she described the process it resembled a toy balloon being inflated and then collapsing with expulsion of the air.

Necropsy findings. The body was that of a poorly developed but well nourished white male child, the body clean, well kept; hair of the head fine, silky like, slightly brownish to sandy in color; the eyebrows dark brown in color and delicately arched, the skin over the entire body fine, delicate, smooth, and of a velvety texture; the fingers long, tapering, and the hands narrow, slender and of a girlish type.

Morbid anatomy. "Angelic child" of Gross; hypertrophy cervical, axillary, inguinal, mesenteric, retroperitoneal, tracheobronchial, solitary and agminated intestinal follicles, and group of lymph nodes along common bile duct; subpleural and epicardial petechial hemorrhages; chronic valvular endocarditis, middle aortic cusp; congenital stenosis (hypoplasia) aortic valve; congenital anomaly, supernumerary (fourth) lobe right lung; splenic follicular hyperplasia, fatty degeneration of liver, persistent and hypertrophied thymus (18 grams).

Histopathology. Spleen. Hyperplasia of reticulo-endothelial cells was present along the sinuses and within the pulp tissue. The splenic corpuscles were prominent as a broad rather deep blue staining zone of lymphocytes surrounding the central area which, instead of being made up of normal blue staining lymphoblastic cells, had either a small focus of necrosis filling the central area or a small necrotic focus surrounded and invaded by reticulated endothelial-like cells of a pinkish acid staining reaction, having a definite tendency to be arranged in a concentric whorl-like manner.

Lymph nodes. Sections of retroperitoneal nodes and one of the nodes located along the common bile duct showed an active hyperplasia of the reticulo-endothelial cells which were prominent around many new formed thin wall blood vessels and along the supporting connective tissue frame work. The sinuses and vasculature of the nodes were prominent and increased to an unusual degree. The follicles were prominent as an outer zone of deep blue staining rim of lymphocytes surrounding the central area, which in most cases was changed to a lighter pink staining reaction and was made up of loose endothelial-like cells having a tendency to whorl formation.

Liver. In a greater number of lobules the liver cords in the central and intermediate zones were thin, atrophic, and to a certain degree showed necrosis. The liver cells in all zones were granular, lighter staining than normal, and contained a large number of small fat droplets. The bile capillaries and ducts were uniformly dilated. Within the liver cells, and the endothelial cells lining the sinusoid spaces, there was present hemosiderin, and some biliary pigment.

I desire here to express my thanks to the physicians who gave me the opportunity to examine these patients and the privilege to use their records.

SUMMARY

1. Unexpected sudden death is the termination of many cases of status lymphaticus.
2. Ananias and Sapphira, status lymphaticus individuals, died from fright.
3. The persistent hypertrophied thymus can be diagnosed by the X-ray.
4. The "angelic child" of Gross is typical of the usual case of status lymphaticus in children.
5. Adult subjects of status lymphaticus often have recognizable anatomical characteristics.
6. Status lymphaticus is frequently associated with congenital defects and anomalies of various organs.

7. The greatest number of deaths from the disease are probably due to an anaphylactic-like autogenous protein reaction.

8. X-ray and radium when properly used will cause regressive changes and atrophy of the persistent, enlarged thymus.

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THE MANAGEMENT OF FRACTURE OF THE FEMUR*

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Fracture of the femur is a serious accident; three to four months are required for the patient to get about with safety even with crutches. The accident is rare enough (five per cent. of all fractures or one in twenty fractures) that few doctors in this audience will obtain much experience in the management of fracture of the femur short of a lifetime. Those who have had the good fortune to have held hospital service on fractures, and in consequence have had a larger share of fractures of the femur, have a duty to their less favored brothers; they should tell them how they succeed with the great number of splints, methods of procedure advocated by the text books; point out a path worth following to one who does not go that way often.

General Principles. Let me quote from a former article: "The indications for treatment of fracture of the femur are four: (1) Reduction. (2) Retention. (3) Posture. (4) Management.

Reduction. Reduction of the fracture is accomplished by manipulation and by manual extension or by power applied through a fracture table, either with complete anesthesia or without it.

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Retention. Holding the adjusted ends of the fractured bones in place is accomplished by one of the following principal means or by some modification or combination of them:

- (a) Some type of splints external to the part held by a bandage.
- (b) Encasing the limb and pelvis in plaster of Paris.
- (c) Applying Buck's extension, adhesive straps, pulley and weight, using the body as counter extension.
- (d) Extension applied to the bone itself, by Pearson's caliper or Steinman pin.
- (e) The Hodgen splint.
- (f) The Thomas splint.
- (g) Open operation, cutting down upon the fracture, adjusting the fractured ends of bone, securing them by some mechanical means, as bone inlay, Lane splint, peg screws, bone splint or metal band.

I think I may fairly say these seven methods of holding the broken bone in apposition are each more or less radically different from the other, and under certain conditions any one of them may be used with success, and each is a proper treatment for fracture of the femur, good results being obtained from each. It is also true that by trial it has been found that certain ones of these seven methods are more generally successful than others. Some are applicable to special types of fracture only, and some have given so much trouble in application and such questionable results that it seems well to avoid their further use as a general rule.

Posture. The third step in the care and management of a fracture of the femur is to place the patient comfortably at rest in bed and arrange for his comfortable eating, sleeping, bathing, and natural calls of the body for a period of twelve to sixteen weeks or more. For this purpose an arrangement for suspension of the part to an overhead frame is desirable. Also the special fracture beds with removable sections are of assistance in nursing and care.

Management. Frequent inspection of the case must be made. In hospital practice and with the more affluent and fortunately located patients in private homes this will include X-ray observation at ten to twenty day intervals, by a portable apparatus. It is usually not advisable to attempt this X-ray observation by taking the patient to the X-ray room for observation and back to bed again. There are too many chances of disarrangement of appliances."

Diagnosis. Three classes must be recognized because they require three somewhat

different procedures in treatment: (1) At the head high up in the upper third. (2) In the long shaft of the bone. (3) Close to the knee, i. e., well down in the lower third.

(1) *Fracture of neck of femur, intercapsular fracture, sub-supra or intra-trochanteric fracture.* Here first we must un-learn what our books have taught us—that these fractures cannot be made to unite when occurring in old people. They can; they do unite. If any one doubts this read the writings of Royal Whitman, of New York, of Willis C. Campbell, of Memphis, Tennessee, of Melvin S. Henderson, of Rochester. Not all old people walk after fracture of the hip, but many do, and a much larger percentage would walk if the limb were put up in *internal rotation, abduction, and extension* with provision for change of posture, care of the skin, and so forth, to avoid pneumonia and bed sores.* This may be done by plaster of Paris spica applied with both of the patient's legs apart and flexed and rotated inward. If one knows how to guard aged persons from pressure sores, plaster spica is safe. In this spica they may be raised up on a back-rest laid back upon the bed and all parts inspected daily.

(2) *Fracture of the Long Shaft.* I have given up Buck's extension by weight and pulley with adhesive straps up the leg because the patient too often gets the weight off. The cord slips off the pulley, or the weights get against the bed, or the pillows get shifted and the leg bends and the fracture slips out of adjustment. Buck's extension has the very serious defect that the body will give the slip until the tension and weight are off. Any one who has ever tried to keep an elderly patient away from the foot of the bed when a slide of four to six inches will relieve the strain, can bear me out in my advice to get away from Buck's extension as a routine treatment for fracture of the femur.

The same is true of Hodgen's most excellent splint; it is fine when it is adjusted just right. But the patient will get out of line, or down toward the foot of the bed and in a few minutes the extension is nil, the alignment is lost and the doctor's work is undone.

Also I do not like plaster casts for the shaft except after union is well established. At the head of the femur it is different. Again quoting from a former article on this subject: "The plaster of Paris spica still holds its place without a peer in fractures about the capsule of the hip joint and as far down as the trochanters. In the ten fractures of the neck of the femur cited in Henderson's report of 202 fractures of the femur in the Mayo clinic,

8 were cured and only 2 were left somewhat crippled, and Henderson especially emphasizes the fact that 'there is no reason why fractures of the neck and trochanters should not be brought to healing. Certainly old age is not a bar.' This is to be accomplished by the plaster of Paris bandage, applied after the technique of Whitman and upon a fracture table only. A few cases have been equally well cured by the more complicated treatment of extension and side traction of Ruth and Maxwell. Even in those that had healed with deformity and helplessness after the lapse of months Henderson operated on 44 and secured 28 cures and 16 failures holding them by the Whitman method." But in proportion as we leave the hip the immediate application of plaster of Paris is less efficacious. It looks fine when first put on but then things commence to happen. We like it about the hip but "Plaster of Paris is not so desirable along the shaft. It rubs and wears the skin; dirt and crumbs get inside and irritate; the tissues steadily drink and the cast loosens and there is no way of taking it up. The heavy cast anchors the lower fragment, while the upper is dislodged by the movements of the body. It hides from view the seat of the fracture. It is useful occasionally and very useful, but not as a routine."

Having discarded Buck's extension, Hodgson's splint and plaster cast, we are narrowed down to wooden splints and Thomas' wire splint. Wooden splints, or straps of moulded plaster of Paris bound to the limb are always available and always good. They will hold a limb while the Thomas splint is being obtained and fitted. They need no brief from me here. The long side splint from axilla to the foot, generously padded, fitted by extra pads where needed has long been a standby.

The wire frame known as Thomas' ring splint is our best reliance for fractures in the shaft of the femur. It is shown here as a full ring horizontal, a whole ring oblique and the half ring horizontal with a strap in front in lieu of the other half ring. I prefer the half ring and strap as one can be kept on hand ready for use and it can be used on either leg. The strap in front allows it to be used on a wider range of various sized limbs. The usual fault in those purchased from a supply house is too short length and too light iron in the side pieces. The sides should be quarter inch iron for an adult and the length should be ten to twelve inches longer than the patient's leg. They are used as follows:

(a) Slip the splint with canvas cross pieces

under the leg before setting (reducing) the fracture.

(b) Have plenty of well padded wooden splints to go about the fracture.

(c) Apply adhesive as in Buck's extension.

(d) Reduce the fracture.

(e) Bandage the short coaptation splints, adjust the ring solidly to the ischium, take the extension strain by the straps to the lower end of the splint either by an elastic pull (rubber tubing from foot piece to splint) or by crank if there is one. I prefer the foot piece and rubber tubing on a good stretch.

(f) Suspend to entire limb to an overhead frame.

Such a limb can be inspected often. By tightening one or more of the canvas cross pieces the bone will bend forward. Upon loosening one or two just under the fracture, the bone will bend backward. If it needs bending outward pass a bandage about the leg and pull it toward the outer iron, inward the reverse. When union is established the surgeon begins passive motion of the knee. Young people always regain the knee motion. Old people do not always recover full motion.

(3) *Fracture Close Above the Knee.* In this fracture the lower or distal fragment lies behind the upper or proximal fragment. Here it is sometimes impossible to secure replacement unless traction is made directly upon the bone (skeletal traction) by means of the steel pin passed through the condyles or by the Pearson calipers or tongs. These require careful application. Within two weeks under the tension of Pearson's caliper the muscles have usually relaxed, the distal fragment has come down and its fractured end come forward until the two fractured ends are in apposition. The case can go on to other treatment dispensing with the calipers.

Walking Calipers in All Cases of Fracture of the Femur. A well fitting walking caliper will allow the patient to be up on crutches much earlier than without it. The time limits of the various treatments are somewhat as follows:

(1) In the calipers, two weeks to three weeks.

(2) In extension in Thomas splint, three weeks.

(3) In plaster of Paris (if union is only partial), two weeks.

(4) In walking caliper two to three months until the leg is solid.

Total: Eight to twelve or fourteen weeks for fracture of the lower end of the femur.

Open Operation. Open operation is re-

quired in the femur when the nature of the fracture is such that the fragments can not be reduced and held in position by traction and external splints. This is the case when soft tissues intervene between the fractured ends and when the fracture is oblique or the bone shattered. There have been many operations for fractured femur that have been failures. The operation by unskilled surgeons has written a bad chapter in surgical history. The nature of the femur is such that if given a good chance it will usually unite even with shortening if well supported and kept straight, but fractures that can not be so reduced and held should go to a well equipped hospital and a competent surgeon for such operation as is demanded by the circumstances surrounding the case. Some will require the encircling metal band. Some will require the Lane splint and still others will require the bone inlay. The surgeon must be the judge.

The Walking Caliper. I must not close this paper without a plea for the walking caliper for the first few weeks of weight bearing. Many fractures are straight and of good length when the limb is removed from the splint. The union seems firm. The patient as well as the doctor, is pleased. After a few weeks of weight bearing all is changed. The limb has a bad outward bow. The deformity is pronounced. This may be avoided by a walking caliper and careful, watchful observation of the progress of the case by the attending physician. Used with the crutches at first, and afterwards without, deformity is prevented and the limb grows strong by use. Strong, yes, and straight. Its more universal use is recommended.

Rialto Building.

DISCUSSION

DR. R. MCE. SHAUFFLER, Kansas City: I was very much interested in Dr. Rainey's paper and intend to try the pin as he described it, having been discouraged in the use of the old method and the heel caliper. I have had much more trouble with the ice tongs or calipers on the os calcis than on the lower end of the femur.

I should like to ask a few questions: First, as to whether he has ever used the pin simply passed between the bone and the heel tendon? Second, will he state very explicitly whether the pin is passed just as close as possible to the surface of the bone—both the posterior and anterior surface of the astragalus—within perhaps one-eighth of an inch?

About Dr. Pearse's paper on "Management of Fracture of the Femur" there is not much to say, except "Amen!" It is all sound and right. There are some details which might be added to it. I should not like you to have the impression it was all suddenly made easy; that if you treat fractures of the femur by the modern method you will not have any trouble.

One of my jobs is to treat fractures of the femur,

and at the General Hospital, where I get a lot of them, I still have lots of trouble and have to work hard; and they are not all very successful even at that although they are better than they used to be.

Fractures of the neck of the femur give a good deal less trouble. These chaps he quotes are delivering the goods. I have seen their clinics and the cases afterwards. If you put on a Whitman's abduction spica according to the method of Whitman, it is all right.

The essential points are, (1) increase of traction when the limb is abducted; (2) internal rotation; (3) lifting up the trochanter which tends to drop backward and outward.

If you apply a proper Whitman spica and keep it on long enough you should get a bony union in the great majority of cases.

Fractures in the shaft are very difficult. They require adjustment after adjustment until you are worn out, and the patient also. You must get a firm enough hold on the leg to make strong extension. Sticking plaster may fail. Those are the cases in which you have to fall back on a caliper on the condyles.

DR. C. B. FRANCISCO, Kansas City: I want to take occasion to say that I think Dr. Rainey's method of getting extension on the legs is an excellent one and it is easy to apply. The great trouble, as I look back over the history of fractures and over my experience with fractures, has been the question of extension. I have no doubt it is more or less your own observation that when you get into difficulty with fractures your difficulty comes with your extension, sometimes with your splinting apparatus, but usually the main trouble is extension. If you can solve the problem of extension you have gone a long way toward the management of the case. With Dr. Rainey's method the question of osteomyelitis is almost nil, therefore, we need not be concerned with that phase of it. I think it will come to better plan than that suggested by Dr. Pearse. In compound leg fractures that are suppurating, the Lane Splint is an added trouble. You are always wondering how long it may be left on. My observation has been that we have not been able to leave them on long enough to accomplish what we wanted to accomplish. The simple method Dr. Rainey has suggested is better.

When you get a femur fracture it is a serious business from the standpoint of result and management. Aside from your neck fractures, the thing is extension. Dr. Pearse outlined the method of extension. Personally, I think you must have extension in fractures of the shaft of the femur, even though you do an internal fixation. I believe the results would be better and your healing promoted and the thing safer with extension.

In certain cases Dr. Pearse outlined, you can use various forms of extension. The best kind of extension is, in my opinion, the Pierson tongs. They are always easy to adjust. They are fairly safe. They are not always comfortable, at least that has been my experience. Once in a while the skin will drag. If uncomfortable, just readjust them.

Another thing that does not work out is that you do not always pull them into apposition. I saw in Pierson's Hospital that they did not use a lot of traction, not more than ten or fifteen pounds, and if they failed to pull them down with that amount they resorted to a little manipulation, and usually were able to get them in position. They preferred that to a large amount of weight on the traction.

I think you cannot expect always to get them to line up properly. I think we will have to acknowledge in most fractures of the femur, whether you use Pierson's tongs or whatever method, you will have

trouble with your knee joint. One of the things Pierson started out to overcome with his tongs was moving the knee early up and down to prevent adhesions around the joint.

The Pierson tongs are not difficult. Most of us should be able to manage them without trouble. The Thomas splint is usually easily managed, particularly when it is fastened to the end of the bed. It is not quite so comfortable to the patient. The management is going to be difficult to begin with whatever method you use, so get it as simple as you can and work at it more and realize that it is not going to be easy sailing.

As to union, certainly we do not get union as firm as we have been taught. Most of us had the impression that six weeks was sufficiently long. You must leave them longer. This is due to the fact no fracture would be solid if immobilized a year. No fracture is solid when your splints are removed or when your function begins. All unions in fractures are soft at the time function begins. It is only function that can harden the bone; keep that in mind. If it is a weight-bearing bone you must protect it well. The Caliper splint is the best method because it can be taken off and the joints moved and the leg massaged.

Sometimes we have been fortunate in not having more trouble owing to the fact people are weak all over and begin getting about with the aid of crutches. In the femur you must have some form of protection, because it will bend badly if not protected.

DR. RAINEY, closing: Dr. Schauffler asked with reference to the pin, that is, the introduction of the pin in relation to the bony surface of the astragalus. The pin should be inserted just above the surface of the astragalus, not through its body. We tried that, and there is where we got our pain when the traction was put on, and also our osteomyelitis. By placing the pin above the surface of the bone, anterior to the tendo achillis, it does not go through the astragalus, but over the top of it. That is the particular point of the whole thing. By going over the astragalus you avoid that pain the patients complain about when putting on the weight. You saw how much weight we had on this patient with the adhesive pull.

There is a point brought to my mind by Dr. Francisco's discussion. Do not put a Steinman pin over astragalus traction in fracture of the femur. When you do that, you will have a direct pull upon the knee joint. I think you will agree a continuous pull on the knee joint is not good for the ligaments of the knee and may result in functional trouble.

I can not agree with Dr. Pearse on the use of the Lane plate in compound fractures. I know it is used by a number of good men but I believe if you put on enough traction you can pull most of these cases into position.

When we have our trouble with adhesive plaster and have a lot of swelling, there is where we must take off our traction; and while we are treating the abscess and draining the leg, we get deformity. By putting the pin over the astragalus, we can keep the bone in position, throughout this trouble.

I want to state I think the place to operate is not in the operating room, but on the bed. We make an operating table of the bed and prepare the leg. We did it time and again in a room where we worked under adverse circumstances, and got away with it.

There is something Dr. Pearse did not bring out, I should like to mention, on fractures of the femur. I called attention to this in a paper before the Illinois State Medical Society last year, and it brought out a lot of discussion. I refer to the transportation of cases of fracture of the femur. We read a lot and have a lot of discussion about what methods to use after they are in bed, but very little about how the

patient should be brought to the surgeon. Sometimes a man is hurt in a plant several miles from the hospital. The ambulance runs down; he is put on a stretcher in a cold ambulance, with no type of splinting on the leg, and the foot is left hanging to one side. If he did not have shock following the fracture, he has it before he gets to the hospital.

I think it is important to remember people with fracture of the femur die from shock. In the old Napoleonic wars, when a man sustained fracture of the femur, it meant death. From the minute he is fractured, he should be kept warm. Don't let him get cold and don't let the bones work back and forth. Put him in a splint before he is moved. There are two kinds of splints that may be used. One is the Liston splint. If you put on a Liston splint and immobilize the leg so that the leg and body move as one piece, he can not move the leg and will be comfortable. Still better is the Thomas splint. Put a little box to support the bottom of the splint and he will ride with ease. I have seen them ride two days in the war and come without any shock, and perfectly comfortable. The patient should be made easy, whether the trip is from one end of the state to the other, or from a local point of injury to the hospital.

DR. PEARSE, closing: I thank Dr. Schauffler for emphasizing the fact it is not easy to take care of these fractures because you use a particularly successful method. I may not have emphasized that enough, but I think it is important and should be burned in on us all the time.

The only reason I was so dogmatic in throwing aside two or three methods was I have found I had trouble with them oftener than the methods I advised.

I think Dr. Schauffler's remarks should be borne in mind. There must be constant observation and proper effort to keep the appliance in correct position. The Thomas splint is not particularly new, but we have learned to use it more than ever before.

RUPTURE OF THE UTERUS DURING LABOR*

REPORT OF A CASE

W. L. CLAPPER, M.D.

ST. LOUIS

In considering rupture of the uterus, it should be borne in mind that although of infrequent occurrence it is one of the most dangerous hazards of pregnancy. Williams¹ states that rupture occurs during labor once in every 500 to 1000 cases. During pregnancy, of course, the incidence is far less. Other writers seem inclined to offer a somewhat lower percentage so that the average is probably about one rupture to every 1500 to 2000 pregnancies. Multiparæ are more susceptible to rupture of the uterus than are primiparæ, Bandl² reporting nine times as many of the former as of the latter. The site of rupture occurring during pregnancy is usually in the upper portion of the uterus while rupture during labor is almost always limited to the lower segment.

Ruptures of the uterus are divided into two

*Read before the St. Louis Obstetrical and Gynecological Society, May 10, 1925.

classes, (1) the complete, when the peritoneal cavity is opened, and (2) the incomplete, when the muscle is torn but the peritoneum remains intact.

A survey of the etiology of this condition would indicate contracted pelvis to be responsible for the majority of cases. Cesarean section, fixation operations, prior curettage, medication with ergot or pituitin, all play a prominent part. Rongy states that three per cent. of all Cesarean sections rupture at a subsequent pregnancy. Transverse positions, cervical stenosis or prolonged labor where the membranes have ruptured early and the cervix is pinched between the head of the child and the pelvic bones, are predisposing to rupture since they favor the formation of Bandl's contraction ring, or any of the many conditions obstructing the normal progress of labor. Hyaline or fatty degeneration of the walls of the uterus, following chronic infection, is considered by many to be a probable factor. Other undisputed causes are version, the application of high forceps and manual expression of the placenta.

Hillis² reports five cases of uterine rupture following Cesarean section. All occurred during pregnancy, two being in the seventh month and two in the ninth. All the ruptures occurred at the site of the Cesarean scar. Each had a supravaginal hysterectomy done and each recovered. Two cases had fever following Cesarean; in two the puerperium was afebrile. The location of the placenta over the scar seemed to have no influence.

Lazard³ reported a patient who had successfully gone through two pregnancies and long, hard labors in the presence of Cesarean cicatrix to rupture subsequently with the third pregnancy before the onset of labor.

Some writers recommend that, if in your judgment the uterine scar is strong, believing the operation had been successfully performed and no infection had occurred, you may give your patient a chance to be delivered by uterine contractions through a normal pelvis, provided the labor is not too long and hard. However, the opinion of the majority seems to be in favor of, "Once a Cesarean, always a Cesarean." Wiseley⁴ reports a case of rupture at the onset of labor. His patient had had four previous high forceps deliveries.

Frequently the cause of the rupture is unknown, or is very doubtful; Fritsch⁵ had 17 unexplainable cases in a series of 500, while Zweifel⁵ had 5 in a series of 30. Uthmöller⁵ cites a case in which rupture occurred at the onset of labor with the membranes intact. The child was normal in size, had a normal head, the presentation was normal and there had been a previous normal delivery. The patient had

had a curettage for retained secundines three years before and the author was inclined to attribute the accident to this, although nothing was found at operation or subsequent microscopic examination of the uterus to substantiate this belief. A supravaginal hysterectomy was done and the patient recovered.

SYMPTOMS

The classical symptoms are sharp, tearing pains, followed by signs of shock and hemorrhage. The pulse is usually rapid, the blood-pressure low and air hunger often marked. There is extreme tenderness of the abdomen and profuse perspiration. If the patient is in labor at the time the uterus ruptures there is abrupt cessation of uterine contractions. Frequently, however, all or most of these symptoms are absent and the condition remains unrecognized as such until exploratory laparotomy becomes necessary. Kreisch⁶ reports a case which had come to operation with indeterminate symptoms and it was decided to do an exploratory laparotomy. There had been a diagnosis of malignant tumor, probably of the liver, made by another physician before the patient was seen by Kreisch. This patient was not seen by Kreisch until 12 days after the rupture had taken place. The pulse was weak and rapid; the abdomen too tender to permit examination. She had lost weight, was vomiting severely and had a cachectic appearance. On laparotomy, a macerated fetus of about eight months gestation was found lying free in the abdomen. A supravaginal hysterectomy was done with drainage through the vagina and abdomen. The patient recovered but was considered still in danger at the time of her discharge from the hospital on account of thrombosis occurring here and there. The author suspected an earlier criminal operation, but the accident was attributed by the patient to lifting a heavy wash-tub. Such a strain, he thought, was insufficient to cause the rupture of an apparently healthy uterus.

It is frequently impossible to make an immediate diagnosis of spontaneously ruptured uterus, as several hours may elapse before symptoms are sufficiently marked to cause alarm and it is fairly generally conceded that a laparotomy should be performed in all cases in which the symptoms of internal hemorrhage appear. Rapid pulse, symptoms of shock, abdominal distention with very distinct palpation of the fetus, should be regarded as cause for alarm and the patient immediately hospitalized.

The treatment is generally conceded to be supravaginal or panhysterectomy and prompt surgical intervention seems to offer the only or at least the best chance of saving the mother's life. Closure of the rupture has been

advocated by a few and it would seem to me that it might be preferable to hysterectomy in young women who do not seem to have a uterus that has been infected from repeated examination or other cause, if the rupture is favorable for a good closing. Needless to say, this should only be done by an operator who feels that he can control the hemorrhage about as rapidly by this method as by amputation. In any case, it does not seem wise to submit such a uterus to a subsequent pregnancy and although it be left in place in order to insure the continuation of the function of menstruation, the tubes should be cut, either then or later. Occasionally, where surgery is not possible, packing of the pelvic and uterine cavities may save the patient. Should there have been profuse hemorrhage or where the condition is very alarming, blood transfusion is of inestimable value.

Petren, analyzing 754 cases of ruptured uterus, found that in 501 cases treated conservatively, there was a mortality of 72 per cent., while in 174 cases operated on the mortality was 53 per cent. The most favorable mortality rate given in any of the literature reviewed was 50 per cent. for the mother and 90 per cent. for the child.

REPORT OF MY CASE

Mrs. L. G., age 35, Polish. Family and personal history negative. No history of any accidents or operations. Patient had three children, all living. Normal deliveries. No miscarriages, no abortions. Had regular menstruation, every four weeks. Duration three to five days. Date of last menstruation unknown.

Patient admitted into City Hospital January 1, 1924, at 4:30 p. m., in first stage of labor. There was two fingers dilatation. Membranes ruptured before admission. Patient had been repeatedly examined by a midwife before entering the hospital. Membranes probably ruptured by midwife. Pains coming every three minutes. Fetal heart, 142. Diagnosis, L.O.A. position.

January 2. 7:00 a. m. Condition remains about the same, apparently making no progress. 10:00 a. m. Pains continue every three minutes. Contractions hard. 11:00 a. m. Continuous contractions. 11:50 a. m. Morphine, gr. one-sixth, and Scopolamine, gr. 1/150. 12:15 p. m. Considerable dilatation. Head floating and some bleeding. Patient more quiet. 4:00 p. m. Pains stopped. Slight bloody vaginal discharge. Abdomen rigid and tender. No fetal heart sounds. There was full dilatation. Head had not entered pelvis. There was only slight increase in pulse rate. Patient did not go into shock or complain of sharp abdominal pains but did have general abdominal soreness and became restless and anxious. Patient was prepared for delivery. Ether anesthesia, catheterized. Large quantity of bloody urine removed. Dead fetus, weighing 4,075 grams, or 9 lbs., was delivered by version and forceps on the after coming head. It was a very difficult delivery. The placenta was removed manually and was not intact but was not adherent. The omentum was found protruding into the vagina. There was a mass felt in the vagina, thought to be a piece of placental tissue, before the version was done. The physicians in charge believed that the

mass felt before delivery was omentum and was pushed aside during delivery.

I was called in consultation, at this time. Diagnosis, ruptured uterus. Pituitrin 1 c.c., ergot 1 c.c., and morphine $\frac{1}{4}$ gr., were given. Pulse 160.

The patient was immediately removed to the operating room and prepared for laparotomy.

Operation: Midline incision from symphysis to umbilicus. On opening peritoneum blood was found in peritoneal cavity. Uterus large but firmly contracted. Uterus ruptured above cervix and across the anterior surface, extending to the uterine arteries on either side but not tearing into them. Peritoneum stripped from posterior surface of bladder. Unable to find any perforation of the bladder. Supravaginal hysterectomy performed. Rubber drain put in cervix. Raw surfaces of bladder covered by peritoneum. Stump of cervix suspended by ligaments. Rubber dam drain also put in cul-de-sac. Abdomen closed in layers about the drain. Four silkworm gut stay sutures. Skin clips to skin. Retention catheter placed in bladder and 750 c.c. of saline given by hypodermoclysis.

Patient had stormy convalescence. Developed severe diarrhea on second day which lasted seven days and also developed a parotiditis. Wounds drained large quantity of pus for ten days. The urine was clear in forty-eight hours and the catheter was removed.

Patient recovered and left the hospital February 10, 1924.

Unfortunately, the specimen was not examined or saved.

SUMMARY

Since the diagnosis of rupture of the uterus was not made at 4:00 p. m., and considering that the baby was dead, a floating head, full dilatation, membranes ruptured for at least 22 hours, and possibly tetanic contractions of the uterus, the method of delivery should probably have been craniotomy and forceps delivery. If the diagnosis of rupture had been made, laparotomy and hysterectomy would have been the best method of procedure. I believe that there was an incomplete rupture of the uterus when the pains stopped and a complete rupture during delivery.

The following were the possible causes of the incomplete rupture: 1. Long, dry, hard labor. 2. Large child. 3. Obstruction caused by distended bladder. 4. Possible pinching of the cervix between the head and the pelvic bones. 5. Tetanic contractions of the uterus.

The cause of the complete rupture was the method of delivery.

My diagnosis of incomplete rupture before delivery was based on the following findings: 1. Pains stopped. 2. No heart sounds. (Death of fetus might have been caused by continuous contractions of the uterus.) 3. Slight vaginal bleeding. 4. Bloody urine. 5. Slight increase in pulse rate. 6. General abdominal soreness. 7. Restlessness and anxiety on the part of the patient. 8. Did not go into shock or have sharp abdominal pains.

My diagnosis of complete rupture, during delivery, was based on: 1. Increased pulse rate, from 100 per cent. to 160 per cent. 2.

Patient in stage of shock. 3. Omentum in vagina.

The mass felt in the vagina before delivery probably was placenta. Since the placenta was not intact when removed it would seem that the position of the placenta was low and that it was traumatized during delivery.

A patient who has had a Cesarean should be watched very closely during her last three months of pregnancy and a Cesarean performed before labor begins or soon after pains have started.

From the somewhat superficial review of the literature and studying the above case I am impressed with the seriousness of the condition. Also, that there is always a possibility of rupture of the uterus either before or during labor.

University Club Building.

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OBSTETRIC TECHNIC IN THE MODERN HOSPITAL

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In presenting this subject it is my purpose to discuss only a few of the points which have been emphasized more or less in recent literature. The expectant mother of today, owing to the prenatal attention she has received, enters the hospital more of a known quantity than she formerly was. She enters the hospital with more confidence and less fear than did mothers before her.

What are the main things which the hospital and attendants shall guarantee to this mother? First, a proper aseptic and antiseptic delivery. Second, as much relief from pain as is possible. Third, watchfulness over her own life and health and the life and health of her child.

A hospital delivery of the present day is equivalent to a laparotomy, as far as aseptic handling is concerned. The patient enters usually in the first stage of labor. The bowels and bladder must be empty. Unless this is done proper rotation and descent of the child may be interfered with. She is prepared as for vaginal surgical work. Preliminary shaving and lysol sponging is the usual routine. Since the advent of mercurochrome, a few obstetricians are using it in preference to lysol. They maintain that it has the advantage over

lysol in that it never causes a skin rash, and over iodine solutions in that it will not burn. As the mother progresses into the second stage, the modern hospital has a delivery room which should be the equivalent of any first class operating room and not just some room which happened to be unsuitable for a patient. I also believe there is more attention to the detail of the sterile hospital pack in the last few years. The modern pack is a thing of beauty to unfold. It is so well organized that each layer presents the next article in the order in which it is to be used, from the sterile lap sheets surrounding the patient to the gowns and other necessities of the physician. These packs eliminate handling and thus lessen danger of infection. In the last five years we continue to stress few vaginal examinations. It is not so many years ago that one of our foremost obstetricians would demonstrate to students a method of trimming the finger nail on his index finger so that it would be useful in rupturing membranes while making his vaginal examinations. So do the times change. A rectal examination gives much information, but if there is any doubt at all a vaginal examination under the strictest sterile precautions should be made.

The relief from pain is the second point in which the hospital is trying to serve. One noted physician has advocated elimination of the second stage of labor entirely by version and manual delivery after dilatation is complete. Whether we agree with him or not it is certainly not a measure that has widespread application. Our main reliance must be on types of anesthesia. The ideal method is one which will abolish sensation without interfering with the course of the labor. This is the point toward which we are striving but have not reached. Still in our memory chloroform was the universal anesthetic but, while having some advantages, had to be discarded because of its dangers. Of late years we have seen other methods; straight ether, morphin-scopolamin-quinin, ether oil (the so called synergistic method), brought forward, widely heralded, and then found that they were of value in certain cases under the right kind of conditions. It is quite probable that at the present time gasoxygen alone or combined with ether offers the widest application and is the anesthetic of choice. It can be pushed during the two most painful parts of delivery, viz., the end of the first stage and the end of the second when the child is pushing through the perineum and complete relaxation is desired.

The third advantage which the hospital should try to offer the mother is proper watchfulness over the life and health of herself and her unborn child. Certain danger symptoms should be watched for. I believe the obstetric

nurse of today should be taught blood-pressure readings, fetal heart location, rectal examinations and presentation as far as is possible by external manipulation. This examination of course is not to be relied upon entirely by the physician, but to be checked up by him. I believe more examinations of fetal hearts during delivery are being made than in former years, and more importance accorded this good signal of the condition of our baby. Some authorities have called attention to the fact that it is not so much the rapidly increasing rate which is a danger signal, but that a rate around one hundred calls for active delivery measures. Passage of meconium in the amniotic fluid, another danger signal, should be checked with the heart rate in order to determine its importance. Episiotomy properly indicated is saving some babies from injury in protracted labor and limiting injuries to the perineum of the mother.

The modern hospital expects to continue improving its service from year to year and what may now seem good procedure may be relegated to the past. We must hope that we shall never blush with shame at some of the methods which are now advocated.

404 Westover Building.

THE KIELLAND OBSTETRICAL FORCEPS*

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ST. LOUIS

There is something wrong about our attitude toward the obstetrical forceps. In fact there is no uniform opinion on the forceps question among medical men. In one well known St. Louis hospital the low forceps are not included in the sterilization of instruments that precedes a delivery. If at the last moment the obstetrician wants to lift the head over the perineum, which is certainly a harmless procedure, the assistants scramble around and finally produce a forceps and boil it for you. At the City Hospital I have heard the nurses say that they shudder whenever they hear a request for forceps of any kind. This attitude is the result of faulty teaching and is all wrong. The other night I was called in consultation by a young surgeon who is a very capable man. He can do intestinal surgery and gallbladder surgery beautifully. He still does some obstetrics. The head was in sight, sagittal suture in anteroposterior position and the woman exhausted. The most simple case in the world, yet this man had been taught so to hate and fear forceps that he insisted upon my making the delivery for him.

*Read at the meeting of the 24th Councilor District, Poplar Bluff, September 1, 1925.

There are probably two reasons for the decline in popularity of the forceps. (1) Pituitrin is so much simpler and easier than the low forceps. (2) Version and Cesarean section produce so much nicer results than the high forceps.

My excuse for coming before you with the old forceps question is, that something new has happened, or rather seems about to happen to the forceps question. Twenty years ago the high forceps operation was frequently performed. Babies were lost and women were mutilated, but the results were considered fair. Then came a realization of the ease, comfort and safety of the Cesarean section, and in those localities where hospital facilities were to be had the abdominal section began to displace the high forceps operation. A little later when pituitrin became known the low forceps operation was less frequently performed; and now that version is the fashionable procedure the high forceps have almost disappeared. Potter, of Buffalo, is responsible for the extreme popularity of the version procedure and as usual the thing has probably been overdone.

In 1580 Chamberlain invented the single-bladed forceps and kept his secret for three generations. This was not considered unethical at that time, however, as all physicians had secret remedies and those who did not have them pretended that they had. A few years later the two-bladed forceps was evolved, and in 1746 Levret added the pelvic curve. We have always been taught that the pelvic curve represented a great advance in our knowledge; that forceps of the Smellie type, for example, were in the infantile class. Now, two hundred years after Smellie's time, comes this Norwegian obstetrician and tells us that the pelvic curve was a mistake; and maybe he is right.

Levret also told us that the forceps were only to be used for one purpose, namely, for making traction. This opinion is held by most obstetricians today. Kielland, however, says that with his forceps he can change the position of the head and do other things that are not possible with the classical forceps.

In Smellie's time the forceps was also used as lever. This was a mistake and nobody claims to be able to do that with any forceps. Baudeloque applied forceps anteroposteriorly and swinging them like a pendulum tried to lift the head over the sacral promontory. This is not done today.

Forceps operations with the head floating above the pelvic inlet are no longer done. If the cause of the failure of the head to engage is a disproportion in size of the head and the pelvic inlet, we do a Cesarean section. This is the simplest and easiest of all deliveries. If

the disproportion is slight, or if failure to engage is due to the unfortunate position of the head, we usually do a version and extraction. No man should go to a confinement case without his version gloves of elbow length.

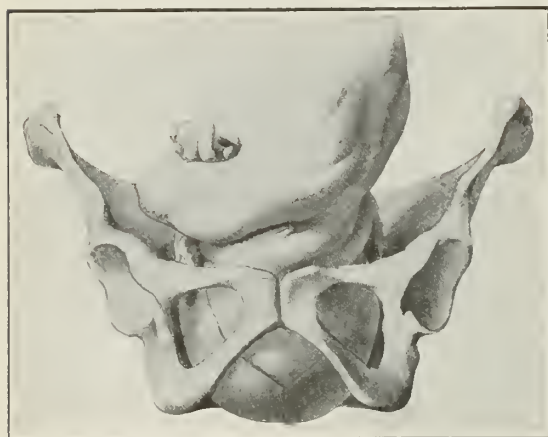


Fig. 1. Head in position in which forceps should be more frequently used. The sagittal suture is in the anteroposterior position and the small fontanel is below the arch of the pubes.

Let us assume that we have a primipara with an external conjugate of 17 c.m. and all other measurements normal. A simple flat pelvis. Child about seven and one-half pounds and not particularly long and normal amount of amniotic fluid. After the test of labor the head still floats and the liquor amnii escaped many hours ago. I know a man who would now do a version and extraction. He does this operation very well and probably this would be the correct thing for him to do. I know another man who would surely do a Cesarean. He also has a good technique and his action is correct. I know another man who would attempt forceps. I know another man who would wait almost indefinitely, hoping that something would happen. I personally do not enjoy doing a version on a primipara with a large child many hours after the escape of all the liquor amnii.

This lack of uniformity is a startling thing. There are very few conditions in medicine or surgery that would receive such a diversity of treatment from well trained men and it seems to prove that the correct solution has not yet been discovered.

If we exclude the so-called low forceps operation, the merest lifting of the head over the perineum with the sagittal suture in the anteroposterior position, obstetrical forceps have certainly fallen into disrepute. While the high and mid forceps have not been abandoned, Cesarean section and version have certainly increased in popularity. Now, however, comes the Kielland forceps and its supporters claim

for it a permanent place in a certain type of arrested labor.

We have practically three forceps: (1) Naegele, (2) Longer Naegele, and (3) axis traction forceps.

In 36 hospitals a very careful report has been made of the application of the Kielland forceps in 1762 deliveries. As a result of this large number of cases the following claims are made for the Kielland forceps: (1.) It is much easier to apply them than the classical forceps. (2.) A twisting movement is possible, either along the normal birth canal, or producing a complete change of position. (3.) The uniform pressure on the head in the biparietal position seems to save the child from injuries. (4.) They never slip. (5.) The head is grasped in such a manner that it actually becomes a little smaller.

The Kielland has an anterior and a posterior blade, not a right and left blade. The anterior blade is grasped like a sword, not like a pen. Two fingers of the left hand locate the anterior lip of the cervix and the blade is inserted with the concave surface *toward the bladder* not toward the baby's head. This is such a revolutionary procedure that it is hard to believe at first. After the blade is well up in the belly it is gently turned in the direction of the clock and readily assumes the proper position on the baby's head. All the 36 authors agree that the application of this anterior blade is surprisingly easy. It practically falls into place. If there is the slightest resistance to the application of the anterior blade, some mistake in the diagnosis of the child's position has been made and you had better begin your examination all over again. The posterior blade is inserted as it is



Fig. 2. Position of head in cases in which it is now proposed that Kielland forceps should be used. The sagittal suture is in the transverse position, there is no flexion or distension of the head, the small fontanel and the large fontanel are equally distant from the examining finger.

to remain there being no change of position after it is in the uterus.

Let us assume that we are occasionally justified in making a twisting movement of the head. This will be denied, but it has been considered good practice for several hundred years. The head is in mid-pelvis, sagittal suture in transverse position, both fontanelles felt with equal facility, labor at a standstill and the woman exhausted. Forgetting for the moment that we ought to do a Cesarean section or a version if we want to be in the fashion, we will consider the possibilities of the twisting movement of the Kielland forceps. Practically all authors agree that the pelvic curve is a nuisance if you want to do any turning of the head and, what is more startling, they all claim that you do not have to turn at all with Kielland; all you have to do is to pull and the head turns itself. If it does not turn when traction is made, then the Kielland forceps is far superior for turning purposes than the classical forceps because it has no pelvic curve and because it has a much firmer hold on the baby's head. The turning movement should always be done alone, however; it should not be combined with the pulling. Sometimes it is even advisable to push the head back before the turning movement is attempted.

The position that this forceps assumes on the child's head is strictly biparietal, not occipito-more uniform pressure on the head—no slipping, no head injuries—and makes the head a mental. It is therefore claimed that it has a little smaller.

Please do not get the impression that I am an advocate of the Kielland forceps. Something new has been proposed to relieve a bad situation and I think it ought to be investigated.

CONCLUSIONS

1. The low forceps, when the small fontanelle is under the symphysis and the sagittal suture in the anteroposterior position is a great help to the conservative man and must be popularized.

2. Any other forceps operation must be viewed with extreme suspicion.

3. Kielland forceps may possibly revolutionize our conception of arrested labor in the transverse position.

4. The traction forceps must go.

Wall Building.

TRANSFORMATION OF WHITE BLOOD CELLS

MARGARET R. LEWIS and WARREN H. LEWIS, Baltimore (*Journal A. M. A.*, March 14, 1925), are convinced that the white blood cells, in all the various forms studied, can give rise to clasmatoocytes, epithelioid cells and giant cells of the Langhans

type. The method of examination which they have devised is a simple one. Small drops of whole blood, taken under aseptic conditions from the heart or periphery, made into ordinary hanging drops and kept at suitable temperatures, contain, after a few days (from two to twenty-one), varying numbers of hypertrophied and highly phagocytic cells, and all transitions between them and the large mononuclear cells. Some of these hypertrophied cells are precisely like clasmatoocytes, and contain from one to many ingested red blood corpuscles in various stages of digestion, a considerable amount of ingested or partly digested debris in the form of granules, which may or may not be surrounded by vacuoles and varying numbers of fat globules. The granules, vacuoles and partly digested material have a marked affinity for neutral red. These typical epithelioid cells are usually numerous, vary greatly in size, and are often many times larger than the normal mononuclears. These cells are exactly similar to the epithelioid cells of tuberculous lesions. The similarity is most striking in the living state with neutral red. All intermediate stages between the typical clasmatoocyte, with its irregularly distributed granules, vacuoles, ingested material and fat globules, and the typical epithelioid cell, with its centrally and radially arranged granules about the centrosphere, are abundant. There is every indication that the clasmatoocytes and epithelioid cells are merely different functional states of the same cell. Giant cells of the Langhans type are common in some of the blood cultures, and are of exactly the same character as the epithelioid cells. They contain from two to many nuclei arranged in the characteristic manner about the large central area. There is no evidence whatever that these cells arise by fusion of mononuclear epithelioid cells. They probably arise by division of the nuclei without division of the cytoplasm. The transformations that occur in the stagnant hanging drop blood cultures suggest that in the spleen, where the blood current is sluggish, a somewhat similar condition prevails and is responsible for the fact that there a similar phagocytosis of injured red blood cells by leukocytes takes place, with resulting clasmatoocyte formation. Again, since blood cells that wander out into the tissue spaces encounter conditions somewhat analogous to those in the hanging drop, it is reasonable to conclude that there they change into clasmatoocytes and, under certain conditions, into epithelioid cells and giant cells.

DIATHERMY IN STOMATOLOGY

Budd C. Corbus, Chicago (*Journal A. M. A.*, Nov. 21, 1925), states that diathermy is absolutely bloodless if a flat or blunt electrode is employed, which, if properly used, insures not only destruction of the mass but also sufficient coagulation of the tissues in the immediate neighborhood to minimize the possibility of cell implantation. Vascular structures situated in the near vicinity are sealed, thereby lessening the absorption of infection. Consequently, a shorter convalescence is insured. On account of the absence of any extensive cutting procedure, post-operative shock is minimized, and this is of great value in operating on patients of advanced years. Lastly, and most important of all, is the density and extent of the scar tissue that results after the employment of diathermy in treating malignant disease. The body defense against carcinoma metastasis lies in the formation of the connective tissue capsule. The scar tissue that is formed after a diathermy "burn" is more dense and spreads farther into the surrounding tissue than is the case after any cutting operation; therefore, we have an extensive reinforcement of nature's attempt to throttle the embryonal cell.

THE JOURNAL

OF THE

Missouri State Medical Association

FEBRUARY, 1926

EDITORIALS

TWO MILESTONES

One of the largest gatherings of the members of the St. Louis Medical Society ever assembled crowded the meeting rooms in their building at 3525 Pine Street on the night of January 5. It was the annual meeting of the Society when the reports of the outgoing officers were heard and the inauguration of the officers for 1926 took place. What characterized this meeting as a hopeful augury for the future was the large number of members who attended the session and the enthusiasm manifested over the good work accomplished in the past and the splendid outlook for the future. The occasion was made more enjoyable by the presence of many wives, daughters and sweethearts of the members, the entertainment features and the announcements of the encouraging progress on the new home of the Society soon to be completed on Lindell Boulevard.

The most important announcement, one that aroused the highest degree of encouragement and enthusiasm, was made by the incoming president, Dr. Amand Ravold, when he broadcast the news that the relatives of the late Dr. John B. Shapleigh had contributed \$45,000 toward the erection of the auditorium as a memorial to Dr. Shapleigh. Under the terms of the donation the Society agrees to raise a corresponding amount, the total sum to be devoted to the completion of the auditorium which, it is estimated, will cost about \$100,000. The architects are at work upon plans for the auditorium and construction will begin as soon as these plans have been completed.

This generous gift from the family of our late confrere will enable the St. Louis Medical Society to proceed with the construction of the complete edifice. The building for the medical library is rapidly approaching completion and it is anticipated that the valuable collection of books now housed in the old building on Pine Street will soon be removed to the new fireproof structure.

The new officers of the St. Louis Medical Society are: President, Amand Ravold; 1st

vice president, C. A. Vosburgh; 2nd vice president, Floyd Stewart; secretary, E. C. Funsch (re-elected); new councilors: Fred W. Bailey, R. E. Schlueter, H. Unterberg, J. F. Mayes.

While the members of the St. Louis Medical Society were happily congratulating themselves at their annual meeting on January 5 on the prospects of the early completion of their new building, our fellow members in the western metropolis of the state were, at the same hour on the same night, enjoying the sensation of dedicating their new home, for the Jackson County Medical Society was then celebrating its first meeting in the quarters reserved for their use in the newly completed Medical Arts Building, at 34th and Broadway, Kansas City. While they cannot aspire at this time to the proud distinction of possession of their home they are the beneficiaries of a most liberal arrangement whereby they will enjoy commodious quarters for their assembly hall and committee rooms and modern facilities in a fireproof structure for the accommodation of their valuable medical library. These quarters have been donated to the Jackson County Medical Society for a period of 15 years.

The new officers of this Society who were installed at this meeting are: President, Robert McE. Schaufler; president-elect, Clyde O. Donaldson; treasurer, Albert J. Welch; secretary, Oliver S. Gilliland; new members of the executive council, Kerwin K. Kinard and Morris B. Simpson.

We congratulate the members of the St. Louis Medical Society and of the Jackson County Medical Society upon these notable achievements. They have erected milestones in the progress of medicine in Missouri that will make the year 1926 stand out in the annals of medical history forever. Those who have borne the greatest part of the burden in accomplishing these objects, for the task was not an easy one in either event, have earned and will receive the commendation of all members of these societies. Their names will go down in the records of the organization as farsighted, self-sacrificing, earnest workers for the future good of medicine and the welfare of the individual members of the profession in years to come. Workers in our organization come and go. The old faces disappear and new faces brighten the road that science must ever travel, but the society never dies. Within the walls of these new buildings will be heard the voices of those who shall record the advancing steps of medical science in combating disease, in protecting health, and in maintaining an organization which, having wholly unselfish purposes, can never die.

SIXTY-NINTH ANNUAL MEETING, ST. LOUIS, MAY 18, 19, 20, 1926

The Sixty-ninth Annual Meeting of the State Medical Association will be held at St. Louis on Tuesday, Wednesday and Thursday, May 18, 19, 20. Following the custom of previous years the House of Delegates will meet on Monday, May 17, the regular scientific work beginning on Tuesday morning, May 18. The Program Committee is arranging for general clinics to be held in centrally located hospitals and for diagnostic clinics at the meeting place. All the sessions excepting those devoted to the clinics at the hospitals will be held in the auditorium of the St. Louis University Law School, 3642 Lindell Boulevard. The auditorium seats about a thousand people and has ample facilities for showing lantern slides and a splendid arrangement whereby the members may view the patients examined at the diagnostic clinics.

This arrangement will curtail to some extent the number of papers to be read but the committee believes that the examination of the patients with the discussion of the condition will fully compensate for the limited number of manuscripts to be read.

Several guests well-known throughout the country for their achievements in medicine will be invited to address the meetings and participate in the clinical work. More complete details of the arrangements for the meeting will be announced in the March issue of THE JOURNAL.

ENLARGED PROGRAM FOR MATERNAL WELFARE

The joint committee, representing the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, the American Child Health Association and the American Gynecological Society, has organized a nationwide propaganda to present the appeal for better obstetrics, more definite prenatal care, and rigid asepsis.

Through state chairmen of groups of lecturers who will on request furnish a speaker for any meeting, the joint committee hopes to present a program on maternal welfare in every medical society in the state. Names of speakers are to be given by the state chairman to the secretary of the state society, from whom secretaries of district and county societies may obtain information.

Originally it was planned to include in the joint committee representatives of the Section on Obstetrics, Gynecology and Abdominal Surgery, of the American Medical Association, but owing to the annual change in the personnel of its officers, and to the fact that no pro-

vision can be made for the financial support of a committee, this was thought by the officers of the Section to be impracticable.

The organization of the joint committee is now comprehensive throughout the country and is already beginning to function in an effective manner.

One of the most vital problems which the profession must solve is that of the early reduction of risk rate to mothers in childbirth. There can be no question as to where lies the responsibility for the vast majority of cases of puerperal sepsis and eclampsia, which are the two outstanding elements in maternal morbidity and mortality. It lies largely with the medical profession itself. The remedy for this condition is to be found, also, within our own ranks and can be expressed in one word, Education.

It is believed that the program outlined by the joint committee will reduce by fifty per cent. our present risk rate to mothers in childbirth. The State Chairman for Missouri is Dr. Otto H. Schwarz, Washington University School of Medicine, Scott & Euclid Ave., St. Louis.

JUGGLING MEDICAL STATISTICS

In the issue of the St. Louis *Globe-Democrat*, January 20, 1926, there is an editorial headed, "Disappointing Medical Figures." The statement is made that only 14 persons per thousand afflicted with tuberculosis who enter sanatoria are alive at the end of twelve years. A short analysis is made as to the causes of these disappointing figures but leaves an erroneous impression with the general public as to the true facts concerning the anti-tuberculosis movement.

The facts of the decrease in the mortality of tuberculosis have been carefully studied by Dr. Louis Dublin, statistician of the Metropolitan Life Insurance Company. He states that in the year 1911 the rate mortality from tuberculosis was 224.6 per 100,000 insured persons. These are working people, men, women and children. By 1921 the tuberculosis rate among these people had dropped to 117.4 per 100,000 and in 1922 it declined to 114.2. The decline between 1911 and 1922 was 49.2 per cent.

One must remember that the class of cases that usually enter public sanatoria are generally in the advanced stages and, therefore, figures from sanatoria do not give the true state of the results of anti-tuberculosis treatment.

The Spahlinger cure referred to in the editorial is discussed in the *Journal of the American Medical Association** in letters from the

*J.A.M.A. 85:368 (July 25), and 688 (Sept. 19) 1925.

London correspondent. These pertinent statements are found:

It is curious that at none of these meetings held in support of the Spahlinger treatment is any explanation forthcoming as to why no one in his native country seems inclined to give it any financial support. Switzerland is by no means backward in science or wanting in resources. Why are the appeals always made to England to save this supposed boon to humanity?

Both his [Spahlinger] home and laboratory are threatened by a bill of sale which was due the end of September.

In these circumstances, Mr. Spahlinger, who hopes that in the meantime he may receive sufficient support to obviate this disaster, has agreed to the request of the Boyne Tuberculosis Committee at Crewe to test this serum for inoculating cattle against tuberculosis.

Apparently the use of this vaccine was to be tried on cattle before using it on patients. From this information one would hardly dare to balance the value of tuberculosis treatment with so new a remedy. There have been so many new remedies suggested and foisted on the public that only the truth can govern our judgment. As yet nothing in the line of a drug, vaccine, light, or any therapeutic agent can be truthfully said to be a cure.

Our hope and mainstay in lessening the mortality of tuberculosis are with rest, proper food, and fresh air. Our anti-tuberculosis campaigns should be given credit for the reduction of mortality by 49.2 per cent. in 11 years.

PORNOPHILIC PABULUM FOR PEDAGOGUES

Our attention has been directed to the January issue of *The School and Community*, the official organ of the Missouri State Teachers Association, edited by Thomas J. Walker, of Columbia, and published under the supervision of the executive committee of the association.

Under such careful official supervision and disseminated unrestrictedly to the pedagogic personnel of the association may be found the full page advertisement of a "Book of Sex Knowledge," by Bernard Bernard, Sc.D. (Phys.), M.P.C., Editor of "*Health and Life*." It is alleged that sales will be made only to those who have attained the ripened mental maturity incident to eighteen years; and the writer cannot but commend the thoughtful paternalistic solicitude of the author (likewise salesman) of this contribution to proletarianized pornography.

It is reasonable to assume that the editor of *The School and Community* and also the executive committee, under whose sponsorship both the official organ and this copious advertisement appear, are like-minded in that it is either of official record that all member-teachers in Missouri are not less than eighteen years of

age; or, on the other hand, if there be those who have not yet attained this mature mental threshold that they will, with ascetic self-denial, curb their juvenile longings for the savory menu which the authorized advertisement tantalizingly reveals in abundant and salacious prolixity. Truly both editor and executive committee have made it pleasingly convenient for our Missouri teachers to be fed on rich and spicy meat.

But questions have arisen: Who is the chef of this aromatic menu thus officially sponsored for the sustenance of our Missouri teachers; what are these learned degrees that Bernard appends to his name; is it possible that Bernard bears any relationship to a second rate wrestler, sometime of St. Louis, later of New York City, a self-admitted authority on physical culture, the alluring contours of human physique, the notable ignorance of the medical profession, and the wholesome advantages of birth control; all of which he offers to the public in a magazine under his direct supervision.

Authoritative data on this problem have been sought from the Bureau of Investigation of the American Medical Association. It would seem that the learned Bernard has journeyed elsewhere for sponsorship of his publication similar to that so generously granted by the editor and executive committee of the Missouri State Teachers Association. The following is, in part, the reply sent last November by the Chairman of the Bureau of Investigation of the American Medical Association to the *Wisconsin Journal of Education*:

Bernard Bernard is the editor of a publication known as *Health and Life*. *Health and Life*, as you can see by a glance through it, is one of these fad magazines whose apparent function is to act as the advertising contact between the victim and the faddist, faker, and quack. Bernard himself is one of the bare torso gentlemen. His picture appears on the inside front cover of his publication, where he is described as editor, author, philosopher, scientist, idealist and champion wrestler. He also holds such positions of importance as "President of the American Continental Weightlifters Association." Needless to say, Bernard's name is unknown in the field of hygiene, dietetics, or public health. Obviously a man of this type, without scientific background or special knowledge of the subject, is unfitted to write a "Book of Sex Knowledge." The subject is one that calls for the greatest discrimination and tact in handling, and should be dealt with only by a person of sound scientific knowledge. It is our judgment that *The Wisconsin Journal of Education* cannot afford to carry an advertisement such as that sent with your letter of November 25.

To the members of our Association it is wholly superfluous to stress the imperative necessity of dealing with all matters relating to sex problems with the utmost discrimination. Publications appropriate for lay consumption must be composed by authorities in this field,

and all gratuitous stimuli to prurience of thought and salacity of action must be rigorously excluded.

There is every reason for the dogmatic statement that Bernard is in no sense qualified for his self-appointed task. The officially sponsored "Table of Contents" is frankly a putrescent lure for the pornophilic minded reader. The editor of *The School and Community*, together with his *laissez-faire* executive committee have, by officially authorizing this advertisement, laid themselves open to deservedly drastic condemnation.

In the interest of elementary decency, it is desirable that the members of our Association counsel with the teachers of our youth and the parents of our children against dabbling with a publication, devoid of scientific merit, that is obviously pandering to frank obscenity as a lure in a shallow "get-rich-quick" scheme.

OZIAS CLINIC DENIED LICENSE

When the hospital and health board of Kansas City refused, on January 12, to license a clinic and hospital conducted by Dr. Chas. O. Ozias, "another menace to invalids was removed from the local field," to quote from an editorial comment in the *Kansas City Journal-Post*.

For years Ozias has mulcted unfortunate sufferers from cancer and other chronic diseases by his flamboyant advertisements, his promises to cure, his assurance that a cure had been accomplished and when death overtook them his statement to the family that the patient had been cured of the disease but had died from "general weakness," or something else equally indefinite. In one instance when the health commissioner, Dr. Herman E. Pearse, went to the clinic to investigate and discuss conditions, the superintendent, a layman named Crawford, offered to pay all of Dr. Pearse's expenses to go to Minneapolis and see a man who had been "completely cured" of cancer. "At that moment," Dr. Pearse said afterward, "I had a copy of this man's death certificate and a report of the autopsy which showed sufficient evidence of cancer of the intestines to cause death." The hospital and health board gave Dr. Ozias every opportunity to prove his right to a license and for three days heard evidence produced by himself and his witnesses and by Dr. Pearse and others to combat the assertions of Ozias. Ozias treated everybody who came to him irrespective of the disease with some sort of preparation containing salt of gold and animal lymph! At least that is what he said the preparation contained and he administered it by hypodermic injections twice a day at \$7.00 per injection.

The story Ozias told the board when describing the condition of a patient was full of high sounding technical phrases so unrelated and illogical and poured forth with such *sang-froid* as to cause one to wonder whether he really believed what he was saying or whether he thought his auditors would not know the difference anyhow. A number of members of the Jackson County Medical Society testified at the trial to establish the fallacy and futility of treatments such as Ozias declared he administered.

Kansas City is to be congratulated upon ridding itself of this man's dangerous activities and it is also to be congratulated on having at the head of its health department such a fearless, militant and competent director as Dr. Herman E. Pearse. That his efforts are appreciated and that the authorities in Kansas City are cognizant of their responsibility to the people in the matter of protection against quacks in the medical field is evidenced by further comments in the editorial from the *Kansas City Journal-Post* to which we have already referred. We quote again: "Even a brief review of the Ozias case would be incomplete without an expression of appreciation for Dr. Herman E. Pearse, health commissioner, who brought the facts of the clinic's operations clearly before the health board for its action. Kansas City is not yet entirely free from the fakers who prey upon the sick, but we are at least a step nearer the ideal."

NEWS NOTES

At the annual meeting of the Kansas City Clinical Society, held January 20, Dr. Jabez N. Jackson was elected President.

Dr. James W. Shankland, St. Louis, has been appointed hospital commissioner for the city to succeed the late Dr. G. A. Jordan.

The next meeting of the State Board of Health for the examination of applicants to practice medicine will be held at Jefferson City, March 9, 10, 11.

Dr. Arthur E. Hertzler, Kansas City, will be a guest of the St. Louis Medical Society on February 9 and deliver an address on "The Classification of Goiter."

Dr. W. A. Gekler, Albuquerque, New Mexico, was the guest of the St. Louis Medical Society January 26 and delivered an address entitled, "Tuberculosis—East and West."

The Kansas City Eye, Ear, Nose and Throat Society held its January meeting at St. Joseph, on Thursday, January 21. Drs. George L. Tobey, Jr., of Boston, and Dr. Walter B. Lancaster, of Boston, were the guests of honor.

William Duckworth, a chiropractor at St. Louis, was fined \$50 and costs in Judge Gayer's division of the Court of Criminal Correction on January 4, after pleading guilty to the charge of practicing medicine without a license.

There is a good opening for a physician at Holcomb, Mo., a town of about 500 population on the Frisco Railroad in the northern part of Dunklin County. The recent death of Dr. John A. Hogue, Jr., leaves but one physician in the town.

Dr. George Gellhorn, St. Louis, was the guest of the New Orleans Gynecological and Obstetrical Society on November 23, and delivered an address at a joint meeting of that body and the New Orleans Parish Medical Society on "Milk Injections for Pelvic Infections in Women."

An examination will be held by the American Board of Otolaryngology in Dallas, Texas, on Monday, April 19, 1926, and in San Francisco, California, on Tuesday, April 27, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

Dr. J. J. R. Macleod, Toronto, Canada, professor of physiology at the University of Toronto, will be the guest of honor and speaker at the annual banquet of the Kansas City Academy of Medicine, Friday, February 5. The subject of his address was not announced.

The Williams & Wilkins Company, publishers of scientific books and periodicals, announce that the name of *American Journal of Electro-therapeutics and Radiology* has been changed to *Physical Therapeutics*. The old title was cumbersome and for that reason the publishers have selected the new title.

Dr. Walter Lancaster, of Boston, was the guest of the Ophthalmic Section of the St. Louis Medical Society, January 23. During the day he conducted an operative clinic at the St. Mary's Hospital and in the evening was entertained at a dinner given by the Section, Dr. Max W. Jacobs, Chairman of the Section, presiding.

The annual report of the treasurer of the St. Louis Medical Society shows that \$73,000

has been expended on the construction of the new building and that \$75,000 remains in the treasury for the completion of the building. It is expected that the new building, including the auditorium, will be completed some time in May.

Dr. H. McClure Young, St. Louis, was elected president of the Southwestern Branch of the American Urological Association at the meeting held in Oklahoma City, November 8. Dr. Nels Ockerblad, Kansas City, was elected vice president and Dr. Clinton K. Smith, Kansas City, was elected secretary. The 1926 meeting will be held in St. Louis.

Dr. Robert Adcox and Sam Kaplan, medical diploma mill operators, were given 30 days jail sentences by the Supreme Court of the District of Columbia after they had pleaded guilty. Both Kaplan and Adcox had testified for the government in the trial of Helmuth P. Holler, President of the Oriental University, Washington, D. C., who was convicted of selling diplomas.

The American Medical Association has begun the publication of a new special journal under the title *Archives of Pathology and Laboratory Medicine*. The first number appeared in January. The editorial board consists of the following: Ludvig Hektoen, Chicago; Simeon B. Wolbach, Boston; William Ophuls, San Francisco; James Ewing, New York; Alfred Stengel, Philadelphia; William G. MacCallum, Baltimore. The subscription price is \$6.00 per annum.

On the program for the meeting of the American Association for the Study of Goiter to be held at Louisville February 1-3, of which Dr. E. G. Blair, of Kansas City, is president, we find the following papers by Missouri physicians:

"Hypogonadism: Diagnosis and Treatment," by Dr. William Engelbach, St. Louis.

"When and How Does an 'Innocent' Colloid Goiter Become a Toxic Adenoma?" by Dr. Arthur E. Hertzler, Kansas City.

"Cardiovascular Changes Associated With Thyroidism," by Dr. Elsworth Smith, St. Louis.

Dr. Ralph L. Thompson, St. Louis, is a member of the Council of the Association.

The revocation of the license of Dr. Frederick W. Brownfield, Crocker, Mo., formerly of St. Louis, was sustained by Circuit Judge Falkenhainer, St. Louis, on January 4. Dr. Brownfield's license was revoked by the State Board of Health on May 13, 1925, after finding

him guilty of false statements concerning his attendance at medical schools. Brownfield appealed to the Circuit Court on writ of certiorari contending that the board had admitted illegal and improper testimony at his trial.

A physiotherapy exhibit was held in St. Louis, January 18 to 22, under the auspices of the Dick X-ray Company as the first annual meeting of the Mississippi Valley Physiotherapy Show. All the meetings were held at the Coronado Hotel and quite a number of physicians were attracted to the meeting. The program was extensive and included the names of some of the most prominent workers in this field in the country.

Dr. John L. Tierney, St. Louis, addressed the St. Clair County (Ill.) Medical Society, at their annual banquet, Thursday evening, January 21, the subject of his paper being, "Your Health." He also addressed the Tri-States Medical Association of Mississippi, Arkansas and Tennessee at Memphis, Tenn., on the evening of Thursday, January 28, on "The Diagnosis of Diseases of the Ductless Glands," with lantern slide demonstration.

The annual Hodgen Lecture was delivered in the auditorium of the St. Louis Medical Society on January 20 by Dr. John H. Gibbon, Professor of Surgery Jefferson Medical College. The title of his address was "Lucas-Championniere and Mobilization in the Treatment of Fractures." The Hodgen Lecture was established by members of the faculty of the St. Louis Medical College before it was absorbed by the Medical Department of Washington University. The fund is administered under the direction of the Medical Fund Society and the St. Louis Surgical Society.

At the annual meeting of the Southern Medical Association held in Dallas, November 9-12, 1925, Dr. C. C. Bass, of New Orleans, was elected President. Dr. W. McKim Marriott, St. Louis, was elected a member of the Council; Dr. H. R. Wahl, Kansas City, vice chairman of the Section on Pathology; Dr. Sherwood Moore, St. Louis, secretary of the Section on Radiology.

Dr. Russell L. Haden, Kansas City, was awarded the first prize for his exhibit on focal infection and Dr. Sherwood Moore, St. Louis, was awarded third prize for his pictures in cholecystography. The next meeting of the Association will be held in Atlanta, Ga., November 15-18, 1926.

Another asthma cure fake, the Asthma-Tab

Laboratories, operating out of Kansas City, Mo., has been denied the use of the mails according to an announcement in the *Journal of the American Medical Association*. This company was exposed by *The Journal* on September 27, 1924, after a very exhaustive investigation which demonstrated that a number of people connected with reputable business concerns were operating the laboratories. One shameful incident disclosed in the investigation was a letter of endorsement of the Asthma-Tab Laboratories on the letterhead of the People's Trust Company, Kansas City, signed by R. F. Combs as vice president.

At the meeting of the Jackson County Medical Society, Tuesday, January 26, held at their new quarters in the Medical Arts Building, the Bell Telephone Company gave a demonstration of the operation of a telephone switchboard. It was a most interesting experience for the members to observe the intricate machinery developed in operating the telephone and to see how the calls are put through with the numerous devices and attachments. It is said that one of the most efficient systems in the world is in operation at Kansas City, the errors having been reduced to less than 2 per cent. Kansas City also has the largest number of automatic telephones in operation in any of the larger cities in this country.

A fraud order has been issued against the Strong Laboratories, Liberty, Mo., makers of an asthma treatment widely advertised to the public. The order was issued by the postmaster general at Washington and forbids the use of the mails to the company for the distribution of the asthma cure or for advertising purposes. The Strong Laboratories formerly operated from Kansas City but moved to Liberty about a year ago. Last October the proprietor, L. N. Smith, sought by injunction against the postmaster general to prevent the issuance of the fraud order. The injunction was denied by Judge Albert L. Reeves on the ground that the courts should not interfere with the operation of another department of the government.

The Better Business Bureau, of St. Louis, is taking an interest in the activities of optometrists who practice without a license from the optometry board. According to an announcement in the *St. Louis Globe-Democrat*, January 24, warrants were issued against four optometrists charging them with practicing without a state license, the evidence being gathered by members of the board of optometry with the assistance of the Better Business

Bureau. It is said that this is the beginning of a campaign to rid the city of persons who practice optometry without a license. Those against whom warrants were issued are: Carl A. Fuldner, 306 North Grand Boulevard; Otto Bachmann, 209 North Ninth Street; S. Bindler, 1012 Franklin Avenue; William T. Gallagher, Frisco Building.

The Travel Study Club of American Physicians, founded at the London International Medical Congress of 1913, is announcing plans for its 1926 Study Tour. Sailing from New York on June 12, the party will visit clinics and medical institutions in the medical centers of Oslo (Christiania), Stockholm, Copenhagen, (optional to Berlin and Munich), Cologne, Heidelberg, Strasbourg, Berne, Zurich, Leysin, Geneva, Paris and London, returning on August 8. Dr. Louis L. Seaman, of New York, is President, Drs. Fred H. Albee, of New York, Edward B. Heckel, of Pittsburgh, John P. Lord, of Omaha, vice presidents. Physicians in good standing, to the limit of fifty, are invited to participate in this tour, and the secretary, Dr. Richard Kovacs, 223 East 68th Street, New York City, will supply any further information desired.

Applications for medical officer positions will be received at the United States Civil Service Commission until June 30. The examinations are to fill vacancies in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches.

Competitors will not be required to report for examination at any place, but will be rated on their education and training weighted at 30 per cent., and their experience weighted at 70 per cent. On account of the needs of the service, papers will be rated currently as they are received and certifications will be made as the needs of the service require.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or at the post office or customhouse, any city.

Bernarr Macfadden, he of the big muscle and bare torso fame, is sending lecturers and exhibitors over the country offering to give a series of lectures on physical culture before local civic clubs. The school authorities in some instances have been persuaded to give these lecturers the use of the public schools. When this was attempted in a town in Virginia the health commissioner asked the American Medical Association for information concerning Macfadden and upon the showing of his connection with *Physical Culture* and the nu-

merous advertisements of fake concerns in that magazine the school board refused to grant the request for the use of the schools. The magazine *Hygeia* has recently published a number of articles describing Macfadden's connections with movements antagonistic to measures for the protection of public health, such as anti-vaccination and antivivisection, and his general contempt and condemnation of regular medical practice. Any members who may learn of Macfadden's attempt to send lecturers to civic clubs in their communities should write to *Hygeia*, 535 North Dearborn Street, Chicago, for a reprint of the articles on Macfadden.

The Tenth Annual Congress on Internal Medicine will be held at Detroit and Ann Arbor, February 22-27, 1926.

The Congress is devoted to amphitheater, bedside and clinical laboratory demonstrations as well as to symposia dealing with modern phases of internal medicine. Distinguished guests from abroad, Canada and the leading clinics of the United States will occupy prominent places on the program. Four days will be devoted to the work at Detroit and on one day the society will be the guest of the University of Michigan at the newly opened eleven hundred bed University Hospital.

All physicians, who are interested in internal medicine and who are members in good standing in their local and national societies are cordially invited to attend the Congress.

Hotel headquarters will be at the Book-Cadillac in Detroit. Information regarding reduced railroad rates, program, hotel accommodations, etc., may be secured from the Secretary-General, Frank Smithies, M.D., 920 N. Michigan Avenue, Chicago, Ill.

St. Louis telephone users recently received the winter issue of the telephone directory. More than 220,000 copies of the book were distributed in the metropolitan district. Considerable interest was aroused on the appearance of 12 new telephone office names, the capitalization of the first two letters of central office prefixes, such as "CA bany," and "PA rkview," and the introduction of initial zeros before all numbers of less than four numerals. They noted that for the first time all suburban subscribers were identified by a small symbol—a D within a circle, this designation being for the information of future dial telephone users. The new names of exchanges are: Atwater, Fremont, Garfield, Hiland, Humbolt, Jefferson, Laclede, Locust, Midway, Prospect, Rockdale, Yorktown. Telephone officials explain that the changes were necessitated for mechanical reasons caused by the introduction of "dial" telephones into St. Louis

next spring. They point out that thousands of numbers have been changed, many subscribers transferred from one central office to another, and they urge that all telephone users consult the directory before calling.

Medical education is to receive a total of \$4,500,000 from the \$10,000,000 Expansion Fund now being raised by Emory University, Atlanta. This money will be distributed as follows: Endowment for the School of Medicine, \$2,000,000; endowment for the Wesley Memorial Hospital, \$2,000,000; Pathology Laboratory and Hospital Administration Building, \$225,000; Nurses' Home, \$200,000; completion of Chemistry Building, \$75,000. The goal of the campaign as a whole is to provide \$6,500,000 in endowment and \$3,500,000 in new buildings to cover the estimated needs of all six schools of the University for the next ten years.

The Emory School of Medicine, formerly the Atlanta Medical College, has long been one of the three largest and strongest A-grade medical colleges in the South. For many years the school has been handicapped both in research and teaching work because of inadequate endowment. The enrollment in each class has been limited to sixty men at a time when more physicians of Georgia alone are dying each year than the two medical colleges of the state are graduating. The school is looking to its alumni and to the other friends of medical education to give the funds so urgently needed for expansion.

A year of construction work finds the vision of a great Medical Center in New York approaching realization. The general problems connected with the launching of such a project are in hand and building progress is satisfactory. Ground was broken for the first unit of the Medical Center on January 31, 1925. This was the combined building which will house Presbyterian Hospital, Sloane Hospital for Women and the College of Physicians and Surgeons. It will cost upwards of \$10,000,000. Adjoining the Presbyterian-Sloane combined hospital is the Harkness Private Patient Pavilion, a \$1,500,000 structure donated by Mrs. Stephen V. Harkness and her son Edward S. Harkness. Work on the Pavilion has proceeded rapidly and its outer shell is practically finished.

The medical college will have thirteen full stories and a tower. It will be connected with the hospital by an axis of the same height. Wide interest is being displayed in the New York State Psychiatric Institute and Hospital which will be one of the institutions of the

Center. It will be used by the state for research in the causes and treatment of mental disease. Only cases of special scientific interest will be housed in the Psychiatric Institute, others being sent to the regular state hospitals. The Vanderbilt Clinic, now at Sixtieth street and Tenth ave., will be a part of the Medical Center Out-Patient Department, excavation for which has begun. Sketch plans are being developed for the Neurological Institute, another hospital of the Medical Center. The Institute is now located on East Sixty-seventh street. A building program is being developed for Babies Hospital which will also move to the Center.

It is expected that the institutions of the Medical Center will be in operation late in 1926.

The 1926 foreign clinic assemblies given under the direction of the Inter-State Post Graduate Assembly of North America will cover a territory including the chief clinic cities of Italy, Switzerland, Germany, Austria, Czechoslovakia, Holland and Belgium. The party will sail from New York on April 28 on the "Araguaya" of the Royal Mail Steam Packet Line which has been chartered to take the physicians abroad. The party will land at Cherbourg and will go at once to Paris where the clinic assemblies start. The clinic cities to be visited are as follows: Paris, Rome, Florence, Padua, Milan, Berne, Zurich, Munich, Vienna, Prague, Berlin, Amsterdam, The Hague, Utrecht, Leyden and Brussels. There will be extension assemblies held in all other principal medical centers of Europe following the main assemblies.

It is of interest to note that a large per cent. of the distinguished teachers, who will instruct the assemblies, speak the English language. However, there will be a director chosen from the teaching staff in each of the clinics, who will be able to speak good English in case the chiefs do not.

Admittance to the clinics and privileges of the tour will be protected by the issuing of an admittance ticket or card. This rule will be strictly enforced in order to protect the Association in its membership requirement, which is, that a physician must be in good standing in his State or Provincial Society.

A second section of the assemblies for a limited number will be conducted during the summer months for those who are unable to take advantage of the April sailing. The members of the party will leave New York S. S. "Pittsburgh" on June 19, return sailing, August 13 from Antwerp S. S. "Zeeland."

The officers of the assemblies are: Dr. Charles H. Mayo, Chief Executive and General Chairman, Rochester, Minnesota. Dr. Carl Beck, General Secretary, Chicago, Illinois. Dr. William B. Peck, Managing-Director, Freeport, Illinois. Mr. Reeve Chipman, Manager of Transportation, Boston, Mass.

Mr. Leslie Dana, on retiring as chairman of the Missouri Commission for the Blind in 1925, established a special fund to be utilized by the Missouri Association for the Blind for the annual purchase of the Leslie Dana Medal for the Prevention of Blindness. In accordance with the terms of the gift, the National Committee for the Prevention of Blindness is to make the annual award under the following conditions:

- a. Long meritorious service for the conservation of vision in the prevention and cure of diseases dangerous to eyesight.
- b. Research and instruction in ophthalmology and allied subjects.
- c. Social service for the control of eye diseases.
- d. Special discoveries in the domain of general science or medicine of exceptional importance in conservation of vision.

Nominations will be received by the National Committee together with detailed information prompting the nomination until the fifteenth day of March, 1926.

The medical profession and ophthalmological societies are invited to submit names of persons deemed worthy of this honor under the conditions set forth above. Address communications to the National Committee for the Prevention of Blindness, 370 Seventh Avenue, New York City.

OBITUARY

LEO F. O'BRYANT, M.D.

Dr. Leo F. O'Bryant, Breckenridge, Mo., a graduate of the St. Louis College of Physicians and Surgeons, 1902, died at his home October 31, 1925. Dr. O'Bryant had recently located at Breckenridge, having formerly practiced at Avalon, Waverly and St. Louis.

CHARLES E. FRY, M.D.

Dr. Charles E. Fry, Tipton, a graduate of the Barnes Medical School, St. Louis, 1893, died at his home December 2, 1925, aged 58 years. Dr. Fry was prominent in medical practice in Morgan County for a number of years when he was located at Syracuse. For a good many years before his death, Dr. Fry was invalided and had retired from practice. He kept up his interest in medical progress, how-

ever, and was an honor member of Moniteau County Medical Society and the Missouri State Medical Association.

IRA W. UPSHAW, M.D.

Dr. Ira W. Upshaw, St. Louis, died at Fort Pierce, Fla., December 30, 1925, of heart disease. Dr. Upshaw was born in DeWitt County, Illinois, 58 years ago and had practiced medicine in St. Louis for over thirty years. A few years previous to the time of his death he had taken up residence in Florida because of his failing health. He came from a family of physicians, his father and brothers all being physicians as well as his three surviving sons who all practice medicine in St. Louis. Dr. Upshaw was graduated from the American Medical College, in St. Louis, in 1889. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association.

RESOLUTIONS ON THE DEATH OF DAVID EMORY SHY, M.D.

The members of the Pettis County Medical Association have learned with regret of the death of Dr. David Emory Shy, on November 5, 1925.

Dr. Shy was a native of Pettis County and resided in Sedalia and vicinity practically all of his life. He was a graduate of the University of Kansas School of Medicine in the year 1907; was President of the Pettis County Medical Society and held a position on the staff of the Missouri-Kansas-Texas Railroad hospital at Sedalia at the time of his death.

Dr. Shy was a modest, kindly gentleman, a master of his profession and devoted his life to his practice and study and had the training and instincts of a kindly family doctor. A comparatively young man at his death, he should have had many useful years in which to add to his splendid reputation and had he lived the allotted time of man and regained his health he would have been a very useful member of the profession.

Considering the good qualities of our deceased brother, we, the members of the Pettis County Medical Association, tender to his family our heartfelt sympathy in their bereavement, and feel that each of us has met with a personal loss in the death of this comparatively young physician.

Be it resolved, That this memorial be spread upon the records of our Society and an engrossed copy be prepared and presented to the family of our deceased friend.

W. J. FERGUSON,
J. E. MITCHELL,
A. J. CAMPBELL,
Committee.

CORRESPONDENCE

PASTEUR IN ENGLISH

To the Editor:

In THE JOURNAL for October, 1925, I find a review of "Oeuvres d' Pasteur" by L. C., in which he advises some enterprising publisher to bring out an English edition of the collected works of Pasteur. In this I heartily agree with him, but his further statement that there is hardly available anywhere even a fairly long excerpt from any of the studies on vinegar fermentation, the diseases of wine, etc., is certainly not entirely true. I have on my desk in the Harvard Classics, Volume 38, page 287, et seq., quite a complete statement much of which seems to be an exact translation of Pasteur's work on fermentation, and his answer to the criticisms of Liebig. It also gives his paper on the application of the germ theory to medicine and surgery before the French Academy of Sciences in 1878. These books have a very wide circulation.

The life of Pasteur by his son-in-law has also been translated by several different persons, as has also the book by Duclaux, both of which, and especially the latter, go into the work of Pasteur fairly thoroughly concerning all of the points which are mentioned. I cannot therefore feel that we are as badly off as this review would have us believe.

None the less, I hope that some publisher will take up the suggestion of L. C., and personally I would be very glad to undertake the translation of some of these articles if a publisher can be found.

MAZYCK P. RAVENEL, M.D.,
Columbia, Mo.

[Dr. Ravenel's letter was shown to Dr. Clendening who wrote the review in question and his comment follows:]

I think Dr. Ravenel's letter should be published in THE JOURNAL in order to counteract my statement that no excerpt from Pasteur's writings of any length is available in English. With his offer at hand, Dr. Ravenel should certainly be commandeered to translate Pasteur into English and I gladly nominate him for the task.

LOGAN CLENDENING,
Kansas City.

NO PHYSICIANS NEEDED

To the Editor:

WHEREAS, It has been called to the attention of the Adams County Medical Society that the management of the Western Catholic Union Building, of Quincy, Illinois, is sending out literature to physicians outside of Quincy stating "that there is a demand here" for physicians and surgeons, and that such management is endeavoring to induce physicians located in other communities to come to Quincy to practice their profession and secure offices in the W. C. U. Bldg., and,

WHEREAS, At present there is an ample number of physicians in Quincy to take care of the needs of the people, which is testified by the following facts:

The A. M. A. states that at present (1925) there is an average of one physician to every 726 people in the United States. The 1925 A. M. A. Directory gives the population of Quincy as 36,764 with 72 graduate physicians, making one physician to every 511 persons. It is claimed, however, that Quincy now has 41,000 people. A recent survey shows 71 graduate physicians here, which would make the physician to population ratio 1 to 577 even if Quincy's population be considered as 41,000 (U. S.

Census Bureau estimates Quincy's population for 1925 as 37,500). Therefore it is easily seen that even if Quincy has a ratio of 1 to 577, it is much more than the average throughout the country (1 to 726) and that Quincy actually has now a *surplus* of physicians.

WHEREAS, The spreading of such false information concerning the "demand" for more physicians in Quincy is apt to work a real hardship on physicians who may be induced to locate here by causing them to give up a practice in other territories to come to a community that already has a *surplus* of physicians.

Be it resolved, That the Adams County Medical Society at its regular meeting held at Quincy on the 14th day of December, 1925, protest this action of the Western Catholic Union Building management and that copies of this resolution be sent to all members of the Supreme Council of the Western Catholic Union, to the American Medical Association and the several state medical associations in nearby states as well as the Quincy press.

ADAMS COUNTY MEDICAL SOCIETY (ILL.),
Harold Swanberg, M.D., Sec.,
Quincy, Ill.

BERLIN WELCOMES AMERICAN PHYSICIANS

To the Editor:

We wish to call your attention to an article appearing in the *Journal of the American Medical Association*, January 16, Department of Foreign News under the title, "Berlin Faculty decides against official welcome to American physicians," copied from a German medical journal dated December 11, 1925.

The reason given by the Faculty of the Berlin University for this action was on account of the exclusion of German physicians from taking part in international medical congresses.

There is no doubt that this was the attitude taken by the Faculty of Berlin last fall, but many things have transpired to strengthen our international relations since that time. The condition at the present time is entirely different.

The first of this month we received assurance from both the German government and the Faculty of Berlin that the members of the Inter-State Post Graduate Assemblies, who will visit Berlin, June 15, 16 and 17, will receive a most hearty welcome. These greetings were received following several months of discussion between the representatives of the German government, the Faculty of the University and representatives of this Association, especially with Dr. Carl Beck, Secretary of the foreign assemblies of this organization, who is now in Europe completing the final clinic arrangements for the 1926 assemblies.

Following the publication of the article above mentioned, we cabled Professor Bier, the chairman of the Berlin clinic committee of this Association, to give us a statement so that we could speak authoritatively. The following is a copy of Professor Bier's answer:

Berlin, January 21, 1926.

"William Peck,
Freeport, Illinois.

Under the stated circumstances heartiest welcome. Letter follows. BIER."

In bringing about this understanding we believe we have advanced largely the spirit of International good fellowship in which this organization is deeply interested.

WILLIAM B. PECK,
Managing-Director Inter-State Post
Graduate Assemblies, Freeport, Ill.

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One hundred and sixteenth meeting, December 14, 1925

1. PRESENTATION OF CASES.

A. HEMIPLEGIA OCCURRING IN THE COURSE OF PNEUMONIA IN AN INFANT.—By DR. McKIM MARRIOTT.

The patient, an infant 2 years of age, was taken sick with symptoms of pneumonia 10 days before admission to the St. Louis Children's Hospital. At the time of entrance there were signs of a diffuse bronchopneumonia and a bilateral otitis media. The temperature gradually fell and the patient was apparently convalescent when a convulsion occurred which was confined to the left side of the body. There had been no premonitory symptoms and no "meningismus." The convulsion lasted 20 minutes. A lumbar puncture was done; the first 25 c.c. of fluid was clear, the next 25 c.c. reddish yellow and contained numerous red blood cells. There was no increase in leucocytes in the fluid and no organisms were present. Following the convulsion there was a flaccid paralysis of the entire left side, including the face. The infant's temperature reached normal shortly after the convulsion and has remained normal for the past two weeks. The blood white count is now normal. The paralysis is gradually clearing and the baby now has some use of the left arm and leg, and the facial paralysis is less marked. The abdominal reflex on the left is decreased. The patellar reflex is slightly increased and there is a positive Babinski on the left side. Subsequent lumbar punctures have shown the fluid to be under increased pressure, of a straw yellow color and to contain crenated red cells.

Meningitis is ruled out by the spinal fluid findings and the normal temperature. A brain abscess secondary to ear involvement appears unlikely because of the sudden onset of the symptoms, wide distribution and absence of evidence of infection, meningeal or otherwise. A vascular lesion with embolus or hemorrhage seems probable because of the very sudden onset. Such a lesion, if in the cortex, would have to be very extensive to cause a complete left hemiplegia. A much less extensive lesion, located subcortically, or in the internal capsule, could well account for all of the symptoms observed.

Such a complication as this is rare in children, especially when there is no heart lesion.

B. A CASE OF SO-CALLED "IDIO-PATHIC" HEMATOPORPHYRINURIA PRESENTING SYMPTOMS OF GALL-BLADDER DISEASE.—By DR. L. D. THOMPSON.

Mrs. S., a white married woman, 43 years old, born in Germany, entered Barnes Hospital November 12, 1925, complaining of paroxysms of cramp-like pain in the abdomen. Family history was irrelevant. Past history revealed an obstinate chronic constipation and frequent migraine-like attacks beginning as a severe headache and terminating with nausea and vomiting. The present illness began about 16 months ago with a severe migraine-like attack following which she complained of "fullness" in the epigastrium accompanied by gas eructations

after eating. These digestive disturbances gradually became more severe and troublesome and on November 4, 1925, coincident with a migraine-like attack, cramp-like pains developed in the abdomen. In spite of a cathartic and an enema the bowels did not move for three days. In the meanwhile she vomited occasionally and the pain became localized in the mid-epigastrium radiating through to the back. The dull cramp-like pain was present continually and in addition there were paroxysms of more severe sharp pain. Morphine was given to relieve the paroxysms. Physical examination revealed no jaundice, no abdominal rigidity and no mass. There was slight tenderness to pressure in the epigastrium. The reflexes and sensory findings were normal. There was no leucocytosis and the blood Wassermann was negative. The temperature was never above 38° per rectum, although the pulse rate averaged about 120 per minute. Special laboratory tests revealed an achlorhydria and an impaired liver function (phenoltetrachlorophthalein test). Cholecystogram gave no gallbladder shadow. The stools were normal in color and consistency and there was no blood found. The urine was port wine in color and darkened on standing. Spectroscopic examination showed the pigments to be urobilin in abnormal amounts and one of the porphyrin bodies. The guaiac test was negative.

While the case agreed entirely with the clinical picture of "idiopathic" hematoporphyrinuria as described by Harbitz, the evidence of a diseased or abnormal condition of the gallbladder justified an operation. The gallbladder was removed. No stones were found and the bile which appeared normal was sterile. The gallbladder was small and densely adherent to the other abdominal viscera. The microscopic findings were those of a chronic inflammation. The recovery was uneventful, the paroxysms of pain immediately disappeared and urobilin was no longer present in abnormal amounts in the urine. The porphyrin bodies could be found in varying quantities up to the time of discharge. At no time following the operation was the amount of hematoporphyrin so great as it had been before the operation.

Summary: A case of porphyrinuria apparently belonging to the class of so-called "idiopathic" hematoporphyrinuria has been observed during the course of the first typical attack.

The symptoms also suggested gallbladder disease and the porphyrinuria was associated with a definite pathological condition of the gallbladder.

Cholecystectomy relieved the symptoms of abdominal pain and following the operation urobilin in abnormal amounts disappeared from the urine. The hematoporphyrin was greatly diminished in amount.

2. CYTOLOGY OF THE SYNOVIAL FLUID OF NORMAL JOINTS.—By DR. J. ALBERT KEY.

In some studies on the joint exudates in arthritis it was found necessary to establish the number and varieties of cells present in normal synovial fluid. This was done on rabbits and the results were checked by the study of the normal joint fluids of man and various laboratory animals.

The normal joint fluid contains from 75 to 350 nucleated cells per cu.mm. and in most of those examined the cell content ranged from 225 to 275 cells per cu.mm. By means of supra-vital staining with neutral red and Janus green it is possible to classify the cells as monocytes, clasmatocytes, indeterminate macrophages, primitive cells, leucocytes, and synovial membrane cells.

The typical monocyte of the blood is a feebly motile cell which contains a large kidney shaped nucleus and a small rosette of granules which stain salmon pink with neutral red. In the joint the monocytes are non-motile and the characteristic neutral red rosette is often larger than in the blood monocyte. In addition to the rosette these cells usually contain a variable amount of neutral red material and clear vacuoles in the cytoplasm.

The clasmatocytes of the joint resembles the moderately stimulated clasmatocytes of the tissues. They are large non-motile cells with a rather small round or oval nucleus. A variable amount of neutral red granules and vacuoles and clear vacuoles are scattered irregularly through the cytoplasm.

The indeterminate macrophages are the mononuclear phagocytes which cannot be definitely identified as either monocytes or clasmatocytes. Probably most of them are highly stimulated monocytes.

The primitive cells are small cells which resemble lymphocytes, the chief difference is that in the primitive cells the mitochondria are scattered irregularly through the cytoplasm. As they develop into monocytes the above four types can be grouped as cells of the macrophage series.

The leucocytes are actively motile and are identical with those of the blood. The synovial lining cells vary in size and shape and are characterized by the fact that they do not stain with neutral red. The protoplasm resembles ground glass and many contain a few clear vacuoles.

The average of the differential counts on 50 normal joint fluids was monocytes 58 per cent., clasmatocytes 15 per cent., indeterminate macrophages 14 per cent., primitive cells 1 per cent., leucocytes 5 per cent., and synovial lining cells 3 per cent.

After death the cells (especially leucocytes) from the surrounding tissues wander into the joint and the fluid contains more cells and the differential count is altered.

3. UROBILINURIA AND LIVER DISEASE.—By DR. ROBERT ELMAN.

Urobilin, a normal pigment constituent of the bile and stool, is present in traces or not at all in normal urine. Clinical interest was aroused by the discovery of it in the urine in noteworthy quantity during the course of many diseases; among others, in patients suffering from liver damage or biliary obstruction. Of great importance for the clinical interpretation of the finding is the determination of what is responsible therefor within the organism. Despite the tremendous amount of work and the variety of hypotheses concerning the physiology of this biliary pigment in the normal and diseased animal, relatively little that is positive has been ascertained.

Recent experiments by McMaster and Elman have shown that, under normal conditions, urobilin is formed in the dog only within the intestinal tract, its presence in the feces and bile depending upon the passage of bile to the intestine. Complete bile deprivation by drainage of the entire bile quantity under sterile conditions or exclusion of it from the intestine by direct closure of the common duct results in a complete disappearance of urobilin from bile and stool. But whenever bilirubin enters the intestine, urobilin is rapidly formed therefrom, part of which escapes in the stool while another part is resorbed from the gut either as such or in the form of related pigments and makes its appearance in the bile.

These facts were found to hold true even under circumstances of experimentally produced liver dis-

ease unaccompanied by infection. Urobilinuria was never found after liver damage except when the pigment was present in the intestine. Thus, for example, it appeared during the first days after ligation of the common duct, but disappeared as the stools became acholic. When this had happened, a small amount of urobilin-free bile, given by mouth, precipitated a prompt urobilinuria. After obstruction of the duct from one-third of the liver, mild urobilinuria was found, but no bilirubinuria. In animals intubated for the collection of a part of the bile only, while the rest flowed to the duodenum through the ordinary channels, liver injury caused urobilinuria, unless, indeed, it was so severe as to lead to bile suppression, when almost at once the urobilinuria ceased, though the organism became jaundiced.

The conception of urobilin pathology that accords with the facts observed in these experiments is that the liver receiving urobilin by resorption from the intestine into the portal blood under normal circumstances, loses, when diseased, a part or all of its ability to dispose of this pigment which, instead of being removed from the blood, passes on into the general circulation and is excreted by the kidneys.

The importance of these relationships lies in their bearing on the interpretation to be accorded urobilinuria in the diagnosis and prognosis of liver disease. Urobilinuria is a valuable finding in that it makes manifest biliary disturbances of mild degree (involving 30 per cent. of the liver) which, perhaps, could not be discernible in the urine in any other way. Bilirubinuria, on the contrary, occurs only when liver damage or obstruction is considerable (over 80 per cent. in the dog and monkey). In such cases, the finding of urobilin as well indicates that total biliary suppression had not developed and that bile was still reaching the intestine.

4. A NEW METHOD FOR DIAGNOSIS AND CONSERVATIVE TREATMENT OF THE SPHENOID SINUS. PRELIMINARY REPORT.—By DR. ARTHUR W. PROETZ.

A method was outlined for the irrigation of the sphenoid and the posterior ethmoid sinuses without traumatization.

The patient is placed in the supine position, and the head is allowed to hang over the edge of the table in such a way as to place the sphenoid sinus at the bottom of the cavity with its ostium uppermost. A measured amount of the irrigating fluid is then introduced into the nose anteriorly with a pipette. The fluid then runs into the pocket formed by the face of the sphenoid and the cribriform plate of the ethmoid.

Intermittent suction is now applied to the nostril with the palate of the patient in the "k" position in order to shut off the nasopharynx. By this means bubbles of air are displaced from the sinus and replaced with droplets of the solution. A few alternations of pressure will fill the sinus. When the patient now returns to the upright position, the fluid remains in the sinus for periods varying from three to thirty hours.

Iodipin was introduced into the sinus by this method and shown by X-ray.

The method should not be used in acute infections, nor will it be of much avail in cases where there are permanent changes in bone and lining membrane. It is designed to relieve those cases in which the acute stage is passed but no permanent changes have occurred.

PROCEEDINGS OF THE KANSAS CITY ACADEMY OF MEDICINE

Meeting of October 30, 1925

MEDICAL TREATMENT OF GOITER.—

By DR. P. T. BOHAN.

When first introduced for the treatment of goiter about one hundred years ago iodine was used for all forms of thyroid enlargement, a practice still too often followed. That iodine will prevent certain types of goiter seems to be established. In some types it acts specifically in reducing the size of the gland; in some types of toxic goiter it combats the toxemia. There are other types in which the use of iodine is positively contraindicated. Plummer's classification places nearly all types of goiter in one of four groups: colloid, adenomatous, toxic adenoma, and exophthalmic.

1. Colloid goiter is simply a passive accumulation of colloid material in the alveoli. It usually disappears before the age of twenty-two. In adults it is the rarest type of goiter and is generally associated with hypothyroidism. According to Marine, this type can be prevented by iodine and if given sufficiently early will cause the enlargement to disappear in nearly all cases. Marine advises two drops daily for two weeks, twice a year, of the saturated solution of sodium iodide. This amount enables the thyroid to elaborate an adequate amount of thyroxin to meet the needs of the organism. Larger doses may be harmful.

2. Adenomatous goiter is the commonest type of goiter seen in adults in this vicinity. The accepted explanation of these nodules is that they spring from the remnants of ducts, usually not palpable before the age of puberty or later, and seldom become toxic before the age of thirty. The recognition of this type depends upon feeling the nodules, which vary in size and consistency.

There is no medical treatment for this type of goiter. Being non-toxic it causes no symptoms except, occasionally, pressure symptoms. *Iodine should not be given.* Only rarely does this type of goiter become toxic under thirty-two, unless patients have been given iodine.

When hyperthyroidism is once initiated in these cases it usually persists. Neither desiccated thyroid nor thyroxin is indicated and either may be harmful.

Iodine, following the Marine method, if given before puberty and continued for a number of years thereafter, is supposed to prevent the development of adenomas in a large percentage of cases.

3. Toxic adenoma. This form of hyperthyroidism differs clinically from exophthalmic goiter by the absence of exophthalmos or other eye signs and in running a longer course. The onset is rare under thirty-two. Spontaneous recovery is not likely to occur. The basal metabolism is not increased as much as in exophthalmic goiter. The greatest danger in these patients is the cardiac damage. Serious forms of disturbances of rhythm occur in about one-third of the cases.

The best treatment for this form is surgical removal of the gland. Medical treatment consists in rest, sedatives, and forced feeding. For auricular fibrillation, digitalis should be given, although slowing of the heart rate is less easily obtained than in patients that are not hyperthyroid. A normal rhythm may be established with quinidine; but, if the cause of the arrhythmia is not surgically removed, the fibrillation tends to recur. Iodine aggravates all symptoms and should not be given.

4. Exophthalmic goiter. The effects of iodine in

this type of goiter have been summarized by Boothby as follows: Two-thirds of the patients are greatly benefited, one-third slightly benefited, 5 per cent. not benefited.

Although the basal rate falls and though all the symptoms are relieved by iodine, cures should not be expected in many cases from its continued use. The greatest improvement is during the first few weeks.

Few statistics giving the results of the medical treatment in a large number of cases are obtainable. Campbell presents an analysis of 127 cases treated medically over a period of ten years at Guy's Hospital. End results were: Cured 8 per cent.; almost cured 30 per cent.; much improved 34 per cent.; not improved 13 per cent.; died 15 per cent.

It is my opinion that hyperthyroidism, whether due to exophthalmic goiter or to toxic adenoma, is as definitely a surgical disease as appendicitis. When surgery is not feasible, the next method of choice should be a combination of X-ray with bed rest for months, nerve sedatives (iodine in exophthalmic goiter), and plenty of food.

SURGICAL TREATMENT OF GOITER.

—By DR. KERWIN KINARD.

Dr. Bohan has seen fit to adopt Plummer's classification of goiter, which from a clinical standpoint seems to serve us very well. However, the thyroid adenomas, from a purely pathological standpoint, have been worked out more substantially by Hertzler than anyone else and I have a preference for his classification.

Adenomas are essentially of three kinds:

1. The fetal adenoma described by Wölfler, which is probably due to embryonal inclusions of small nests of cells that become isolated before they metamorphose properly, remain quiescent for a period, and later grow to various sizes. These are definite in their histological structure ordinarily and, while usually single, they are not infrequently multiple.

2. The adenomatous colloid goiter most often constitutes the so-called adenoma of Plummer. These glands show walled-off areas, usually of degenerated thyroid tissue. A degenerated fetal adenoma might show the same type of structure these glands show but ordinarily we believe, with Hertzler, that these colloid adenomas are the result of hyperplasia with periacinar inflammations, degenerations, necroses and fibroses to wall off the acini.

3. The malignant adenoma of Kocher need not be discussed here because it is synonymous with adenocarcinoma of the thyroid as described by Von Eiselsberg.

The pathology of the goiter is confusing because we try to make a clear-cut pathological entity out of tissue that represents various different types of cell change. Thus we may have normal thyroid, fetal adenoma, adenomatous hyperplasia in a colloid gland and the papillary proliferation of the exophthalmic goiter of Graves' disease, all in one gland.

The adenoma is usually slow-growing goiter, whether toxic or non-toxic. It may be single or multiple, may assume a large size by unilateral or bilateral growth. It feels firm and nodular. It may cause pressure symptoms or cosmetic defect at any time during its development. Again, it may undergo malignant change which is usually noted by a sensation of woody hardness to a part of the gland with more or less fixation and less movability from side to side. Pain is also present when malignancy has set in. These same signs and symptoms may be present in a calcified gland, but the X-ray will definitely show the limestone and when no calcified areas are present in such a gland, beware of malignancy.

The colloid goiter may disappear physiologically or under treatment, but it also remains a harmless goiter for many years. Again, it may become malignant. Any of these goiters are surgical goiters when they cause pressure symptoms or toxemia which does not respond to treatment. And all goiters of long standing should be removed whether toxic or not, because, if they do not develop toxemia sufficient to cause the patient annoyance, the possibility of malignancy is always of considerable moment.

The last type of surgical goiter to be considered is that seen with exophthalmos in Graves' disease. It tends toward spontaneous recovery and usually lasts from one to three years before death or amelioration of symptoms occurs. But when spontaneous recovery does occur, the deterioration to tissues all over the body is most severe.

En resume let us consider as surgical goiters:

1. Any goiter, whether toxic or not, that causes subjective symptoms of pressure or which causes cosmetic defect.

2. All toxic goiters that are definitely established.

3. All non-toxic goiters of long standing because of the possibility of malignant change.

4. All operable cases of exophthalmic goiter of Graves' disease.

5. All operated cases that are uncured, that still show evidence of toxemia.

6. Infectious thyroiditis and acute hemorrhage into the gland may give cause for immediate thyroidectomy.

Now, a word as to the surgery of goiter. One can tell more what has to be done after feeling the substance of the gland. Experience teaches us which part should be removed, and whether resection, hemithyroidectomy or subtotal thyroidectomy should be done is a question that can be best decided at operation.

For many obvious reasons it is easy to understand that ligations are of little value because of the rich blood supply of the gland. More and more the operation is becoming obsolete.

The injections of boiling water, quinine, etc., have been relegated to the background.

The success of a thyroidectomy depends, in the main, upon the experience and surgical judgment of the operator. Better do two operations in certain cases with a perfect result eventually than a too complete operation at the first surgical endeavor.

RADIATION THERAPY IN HYPERTHYROIDISM:—By DR. JOSEPH L. McDERMOTT.

X-ray and radium have proved excellent in the treatment of exophthalmic goiter and are also being used in the treatment of toxic adenomata. Radiation therapy is not recommended in all other forms of goiter. Many writers report 80 per cent. of cures in exophthalmic goiter, and some improvement in the remaining 20 per cent. Our personal experience tallies with these percentages. There are three forms of therapy for hyperthyroidism, namely, radiation therapy, surgical removal of a part of the gland, and medicinal treatment. The advantages offered by radiation therapy are:

1. It does not require hospitalization.

2. Patients are not subjected to physical, mental or nervous strain.

3. In a high percentage of cases, patients may undergo the treatment without discontinuing their occupation.

4. It may be combined with other forms of treatment to advantage.

5. Clearly inoperable cases may be successfully treated with radiation therapy.

6. The death rate following radiation therapy is practically nil.

7. When the treatments are administered by a competent radiologist no deleterious effects follow.

8. Patients may be treated in their own homes with radium.

In a large number of cases the metabolic reading shows the rate slightly increased. In these cases a few treatments with X-ray or radium will reduce the metabolic reading to normal.

In cases that are seriously ill, mild treatments of radium will help to tide the patient over the crisis, and in many instances will render the patient operable.

Radiation therapy does not contraindicate the use of Lugol's solution, or other internal medication. Along with radiation therapy careful nursing and intelligent management of the patient is very essential. Complications should be treated by surgery, or internal medication as the case may require.

DISCUSSION

DR. ERNEST F. ROBINSON: I scarcely remember hearing so original and conservative a presentation of the subject. There is one thing, however, that seems quite evident to me and that is that we see more goiters and more goiter symptoms nowadays than we did a few years ago. I believe one reason for this is the fact that thyroid is now given indiscriminately by a great many people. There are two or three patent medicines sold to reduce high blood pressure. The chief ingredient is thyroid.

Surgically, there is only one thing to do with toxic goiter or a big adenomatous gland and that is to take it out. A good plan is to leave one-fourth or one-fifth of the gland, for it is better to have a second operation than to lose the patient or have myxedema.

I do not believe ligations do good. Anyone who has seen these large gland vessels pulsate knows that to ligate one vessel or even two will not have much effect.

In critical cases it is infinitely better to proceed with your operation with a free exposure. If the condition of the patient is so critical that one should not proceed further, leave the wound open for one or two days, if necessary, with free drainage.

In the presence of metastasis no operation on the thyroid should be done. Thyroid metastases occur not infrequently, usually in the bones. It is an argument for early removal of the thyroid.

DR. J. R. McVAY: One thing that has impressed me quite recently is the maladministration of iodine in the various forms of goiter. Shortly after Plummer began using iodine in exophthalmic goiter various commercial houses began offering to the public at large iodine in various forms and in doses which could not be accurately determined. This free use of undetermined doses is probably a more important factor in communities where goiter is more or less endemic than it is here. It is possible that such products as iodized salt and iodine candy might fill a very good place if the dosage were more accurate. One trouble lies in the fact that so many of the mothers in goiter communities take iodine, since it has been recommended for the children as a goiter preventive, thinking that whatever was good for the children was also good for them. Jackson shows very clearly that this may lead to the development of toxic symptoms.

In malignant goiters Broder has shown that in the fresh tissue the malignant goiter was of a salmon pink color on gross section which contrasted very markedly with the glistening, shining, yellowish color of the colloid and the red beefsteak appearance of the exophthalmic goiter.

DR. ALFRED O'DONNELL, Ellsworth, Kansas: It has been a number of years since I have had opportunity of being at the Academy of Medicine. I came one hundred miles to hear this symposium and want to say that I have been very well repaid for my time and effort. The ideas given by the medical men and surgeons certainly are of value. I see very few cases of goiter where I live. I have had very good results with both X-ray and surgery.

DR. DAVID S. DANN: I wish to state more definitely how these cases should be handled from a roentgenological standpoint. If we start out with the idea that amelioration or cure is obtained by destruction of the gland, then we must consider whether we get destruction of the gland by the X-ray. If a cure is obtained by the X-ray, that cure or amelioration of symptoms will show itself after three months of treatment.

The skin of the hyperthyroid patient, being in a state of increased metabolism, is of course more susceptible than the skin of ordinary individuals and must receive less treatment. If no improvement is shown at the end of three months, no more X-ray should be given because there will be no further improvement noted, and it is possible to do harm.

DR. LEWIS G. ALLEN: It is true as Dr. McDermott has said that radiologists generally do not attempt to treat simple goiter nor the non-toxic adenoma. Hence the selection of the case is a very important factor. The adenoma which has recently become toxic, if we accept the theory that toxicity is due to activity on the part of microscopic cell rests, is theoretically a good type for X-ray. I am not optimistic about the treatment of hyperthyroidism characterized by exophthalmus which has existed for a long period of time. On the other hand X-ray has a very definite effect on the thyroid gland and its use in treatment of hyperthyroidism is no longer a question of debate.

We all know the affinity of X-ray for the thymus gland. For that reason I take no chances with X-ray treatment of simple goiter.

DR. BOHAN, in closing: Feeding the feces of a patient who has goiter to another person who subsequently develops a goiter does not prove a great deal. Marine has proved to the satisfaction of practically everyone that the immediate cause of goiter is iodine deficiency. It is also highly probably that focal infections may play a part.

I feel that digitalis is a valuable remedy, especially in auricular fibrillation of hyperthyroidism.

DR. KINARD, in closing: Still speaking of the surgical side, in the last two months two patients have come in with colloid goiters and large ovarian cysts. One was operated on immediately and the thyroid became small. The other case, a girl about 14, had a large colloid goiter, getting no better after treatment. The condition was let alone as she had only the symptoms of an enlarged neck and a slight tachycardia. About one month later she developed an acute appendicitis and at operation a large ovarian cyst was found and removed. The goiter went down to normal size.

X-ray therapy should do some good in adenomas. Those who do a great deal of this work probably have a mortality rate around one per cent. in toxic adenomas, but if they are going to take old cases, bad hearts, etc., the mortality will be higher than that. If the mortality rate is around two or three per cent. it is going to be either lower or higher, depending upon the type of cases accepted. Mortality reduction is due to three things, the type of patients, judgment about how much to take out, and ability to tell the patient he must have two operations.

DR. McDERMOTT, in closing: Dr. Kinard in his closing remarks referred to toxic adenomas and the

failure of these growths to respond to any treatment but surgery. I cannot agree with the Doctor because those of us who use X-ray and radium have found that after the adenoma undergoes hyperplasia and becomes active, many young and immature cells appear which are distinctly more sensitive to radiation influence than the older and more mature cells of the gland. Hence, it is only reasonable to expect that radiation will, in a measure, control the activity of the gland if the proper dosage is delivered.

In the literature of the past few years, many articles touching upon the treatment of hyperthyroidism from the X-ray and radium standpoint have been written. These articles have been contributed by men of wide experience, and in the consideration of the treatment of hyperthyroidism their opinions deserve serious consideration.

Meeting of November 27, 1925

SOME CLINICAL AND EXPERIMENTAL ASPECTS OF CERTAIN BRONCHOPULMONARY CONDITIONS.—

By DR. J. CURTIS LYTER.

Under a number of years of close observation a primary tuberculous lesion of a lung was observed to be followed by multiple lesions either in the same or opposite lung. One would naturally conclude that the tubercle bacilli were transported from the primary lesion to the secondary lesions or that a multiplicity of primary sites of infection were present in all cases of pulmonary tuberculosis.

The primary lesions of all cases of chronic, pulmonary tuberculosis are invariably found located in one or the other upper lobes. There is a great question for investigation and speculation regarding the behavior of the tubercle bacilli from the time they enter the lungs until they produce a pathological process recognized as clinically active tuberculosis. There is also a question for investigation regarding the location of the pathological lesion always in one or the other upper lobes.

Advanced silicosis simulates tuberculosis in that the deposition of silica is found to be most marked in the upper lobes. In the early stages the deposition of silica is found distributed more or less homogeneously throughout the lungs. The deposition of silica in the upper lobes, as is found in the late stages of silicosis, again presents the question of its transportation from the lower lobes to the upper lobes, similar to the possible transportation of the tubercle bacilli from the bronchi to the upper lobes. The presence of cardiac disease or pulmonary disease such as tuberculosis does not in any way influence the ultimate distribution of the silica.

The non-tuberculous infections of the bronchi and lungs usually represent a residue of an acute infectious process and are located most frequently in the upper lobes. The chronic, non-tuberculous infections can be classified usually as chronic bronchitis, bronchiectasis, chronic bronchial pneumonia, and chronic abscess formation.

India ink and an aqueous suspension of charcoal when injected into the mediastinum can be recovered from the lung substance and is found to accumulate in masses beneath the parietal pleura and the visceral pleura. Likewise, when India ink or an aqueous suspension of charcoal is injected in one pleural cavity, it can be recovered from both lungs, the cellular tissues of the mediastinum, and from beneath the costal pleura. At no time was it found beneath the diaphragmatic pleura, in the pericardial cavity, or within the heart muscle.

It is altogether probable that the endothelial sys-

tem of the pleura or capillaries produces a cell which transports the tubercle bacilli, the silica, the India ink, and the charcoal from one portion of the chest to another and that the apical deposition of these substances is favored because of the lessened motility of this portion of the lung during respiration. The non-tuberculous infections of the lung remain localized probably because during the acute infectious processes there is a paralysis of the endothelial cells described.

BARTON COUNTY MEDICAL SOCIETY

At a regular meeting of the Barton County Medical Society held at Lamar on December 29, 1925, the following officers were elected for 1926: President, Thomas F. Miller, Lamar; vice president, John F. Cromley, Lamar; secretary, Wm. H. Popplewell, Lamar.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its November-December meeting at the Court House in Butler on December 17, at 1:30 p. m. The following members were present: Drs. John S. Newlon, Robert E. Crabtree, Thomas W. Foster, Herbert W. Insley, Edw. N. Chastain and George H. Thiele. Inclement weather was accountable for the small attendance, but we had a fine meeting.

After business was disposed of we enjoyed an excellent program, the first number of which was a paper on "Osteomyelitis and the Treatment of Simple Fractures," by Dr. James G. Montgomery, of Kansas City. Dr. Montgomery's lecture was full of valuable and practical information on his dual subject and was immensely profitable to all who were fortunate enough to be present.

Dr. Montgomery was followed by Dr. Wilson A. Myers, of Kansas City, who lectured on the subject, "Anuria, and Its Relation to the Treatment of Nephritis." Dr. Myers' paper was very instructive and his subject was handled in a most interesting fashion. Both papers were productive of much discussion and made the meeting stand out as one of the best of the year.

Officers for the ensuing year were elected as follows: President, Edward E. Robinson, Adrian; secretary-treasurer, Gerald C. Bates, Adrian.

GEORGE H. THIELE, M.D., Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY

Meeting of December 2, 1925

The meeting was called to order at 8:00 p. m. by the President, Dr. Kenney. The minutes of the previous meeting were read and accepted.

In the absence of Dr. Potter, chairman of the Library Committee, the bill for maintaining journals in the Library for 1926 was presented.

Moved by Dr. Bell that the society have an annual banquet in the month of December. Seconded by Dr. Beck. Motion carried. The following members were appointed by the president as a committee to arrange for the banquet: Drs. Bell, Beck and Conrad.

The following officers for 1926 were elected:

President, Dr. C. A. Good; first vice president, Dr. W. J. Hunt; second vice president, Dr. B. T. Quigley; secretary, Dr. L. J. Thompson; treasurer, Dr. J. M. Bell; censor, 1926-27-28, Dr. E. B. Kessler; delegate 1926-27, Dr. J. F. Owens; alternate 1926-27, Dr. W. R. Moore.

Dr. Potter in reporting for the Library Committee recommended an additional appropriation of funds

for the Medical Interpreter (approximately \$48.00) and Archives of Surgery.

Moved by Dr. Woodson that this recommendation be adopted. Seconded by Dr. Delamater and carried.

L. J. THOMPSON, M.D.

CLAY COUNTY MEDICAL SOCIETY

The December meeting of the Clay County Medical Society was held in Liberty, Thursday evening, December 17. The Liberty members entertained visiting members and their wives at a splendid dinner served in the usual hospitable style of the home-like Major Hotel. Twenty-eight were seated at the banquet table including Dr. and Mrs. Ernest Mark, of Kansas City.

The Women's Auxiliary adjourned to the hotel parlors and held an interesting meeting. A letter from the state president, Mrs. M. P. Overholser, was read in which she regretted being unable to attend. Mrs. E. E. Peterson, of Nashua, reviewed Sinclair Lewis' book, "Arrowsmith," a topic overflowing with opsonic indices, micropathology and insoluble theorems stained with methyl-romance, this latter commitment from a male secretary who was not in the auxiliary meeting. The discussion, led by Mrs. J. J. Gaines, was participated in by all present.

A committee was appointed to draft resolutions on the death of Mrs. J. H. Rothwell, one of our best-loved members.

The men's scientific session opened with a lecture by Dr. Marks on "Bladder Neck Obstructions." The doctor spoke without notes and presented conclusions drawn from actual practice in a clear, concise manner easy to understand. It was one of the best talks of the year, and that is saying a good deal. Many members discussed the subject, lending the impression of a group of specialists in action. Dr. Marks was unanimously elected to honorary membership.

The election of officers for 1926 resulted as follows: President, R. J. Wood, Smithville; vice-president, S. R. McCracken, Excelsior Springs; secretary-treasurer, J. J. Gaines, Excelsior Springs; delegate to State Association, J. E. Baird, Excelsior Springs; alternate, W. L. Wysong, Liberty; censor, H. J. Clark, Excelsior Springs.

J. J. GAINES, M.D., Secretary.

COLE COUNTY MEDICAL SOCIETY

Annual Report for 1926

We have had a very successful year. We have had our weekly noon-day luncheon meetings in which we study the "Case Records of the Massachusetts General Hospital," edited by Richard C. Cabot, M.D. This is a wonderful course of study for any medical society, especially on diagnosis, taking the ante mortem and post mortem records for weekly study and discussions. We get these records weekly and every member takes his turn in selecting a record for study. He has it printed and distributed to every member at least one day before our Tuesday noon luncheon. This gives everyone an opportunity to study the past history, family history, present illness, physical and laboratory examinations, and the treatment and course of the disease. The operation, if any, the preoperative and postoperative, final diagnosis, and the post mortem findings are kept secret. Each doctor then discusses the case and gives his final diagnosis. After all have discussed the case, the rest of the records are read and we then know which doctor has made the best discussion and diagnosis.

This course has been of great benefit to us. We

try to duplicate the exercises of the weekly clinicopathological meetings of the Massachusetts General Hospital. We have had these meetings for the past four years and the personnel of our society has been improved in every way. It has drilled us in the keeping of accurate, scientific records and has taught us to think and practice medicine as a science. It has enabled our hospital, The St. Mary's Hospital of Jefferson City, which is conducted by the Sisters of St. Mary, to be now classified in Class A by the American College of Surgeons, who have yearly inspected and classified our hospital. We are indeed proud of our work and the personnel of our society. We have our monthly staff meetings at the hospital and at these meetings we discuss with the Sisters our problems, always striving for efficiency and better end results. These meetings have largely eliminated our unprofessional and unethical rivalries; they have created within us a feeling of good fellowship; and above all have quickened the altruistic phases of our professional life and have made us feel that our lives have not been in vain.

At our last meeting, December 16, 1925, we adopted a new constitution and by-laws and also had "The Principles of Medical Ethics of the American Medical Association" adopted as part of our constitution.

The following officers were elected for 1926: President, Dr. M. R. Aldridge, Jefferson City; vice-president, Dr. S. P. Howard, Jefferson City; secretary-treasurer, Dr. J. A. Hill, Jefferson City; delegate to State Association, Dr. E. E. Mansur, Jefferson City; alternate, Dr. J. S. Summers, Jefferson City. Board of censors: One year term, Dr. R. P. Dorris, Jefferson City; two year term, Dr. F. W. Gillham, Jefferson City; three year term, Dr. S. V. Bedford, Jefferson City.

L. D. ENLOE, M.D., President.
J. A. HILL, M.D., Secretary.

DUNKLIN COUNTY MEDICAL SOCIETY

At the annual meeting of the Dunklin County Medical Society on January 19, the following officers were elected for 1926: President, M. L. Cone, Campbell; vice-president, F. W. Speidel, Senath; secretary-treasurer, Roy Speidel, Senath; censor for 3 years, W. L. Gossage, Kennett; delegate to State Association, E. L. Spence, Kennett; alternate, C. W. Brown, Campbell.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

Gasconade-Maries-Osage County Medical Society has elected officers for 1926 as follows: President, W. E. Johnson, Belle; secretary-treasurer, W. R. Ferrell, Belle (re-elected).

GENTRY COUNTY MEDICAL SOCIETY

Gentry County Medical Society has elected the following officers for 1926: President, Charles H. McCaslin, Stanberry; secretary-treasurer, George W. Whiteley, Albany (re-elected).

GRUNDY COUNTY MEDICAL SOCIETY

The Grundy County Medical Society met December 22 with the following members present: Drs. W. H. Winningham, B. E. Sheetz, O. R. Rooks, T. E. Moore, J. E. Neely, E. A. Duffy.

The meeting was called to order by the president, Dr. O. R. Rooks, and the following officers were elected for 1926: President, Bertha E. Sheetz, Trenton; vice-president, Ursula C. Weston, Galt; secretary-treasurer, Edgar A. Duffy, Trenton; delegate to State Association, Jesse F. Fair, Trenton; alter-

nate, John M. Stone, Laredo; censor (re-elected) Wm. H. Winningham, Trenton.

E. A. DUFFY, M.D., Secretary.

HOWELL-OREGON COUNTY MEDICAL SOCIETY

The Howell-Oregon County Medical Society met in regular session in West Plains, December 17, 1925, at 1:30 p. m. Dr. H. W. Malony, President, called the meeting to order.

Dr. A. H. Thornburgh read a very interesting paper on "Intravenous Treatment with Distilled Water" which was discussed by the society.

Dr. P. D. Gum gave a very well placed talk on "Typhoid Fever" and other subjects of general interest.

A motion was made by Dr. P. D. Gum and seconded by Dr. E. C. Bohrer to drop all members from the society who had not paid their 1925 dues, thereby starting 1926 with a full membership. The motion was discussed by the members and carried.

The election of officers for 1926 resulted as follows: President, Dr. P. D. Gum, West Plains; vice-president, Dr. J. C. B. Davis, Willow Springs; secretary-treasurer, Dr. R. E. Hogan, West Plains; state delegate, Dr. H. A. Thompson, Lanton; alternate, Dr. E. C. Bohrer, West Plains.

The society adjourned to meet in January, 1926.

F. A. BARNES, M.D., Secretary.

JEFFERSON COUNTY MEDICAL SOCIETY

On December 10, 1925, Jefferson County Medical Society elected the following officers for 1926: President, J. W. Pickel, Barnhart; vice-president, J. J. Commerford, Crystal City; secretary-treasurer, N. W. Jarvis, Festus (re-elected).

JOHNSON COUNTY MEDICAL SOCIETY

Johnson County Medical Society has elected officers for 1926 as follows: President, John T. Anderson, Warrensburg; vice president, John E. Porter, Knobnoster; secretary, Thomas J. Draper, Warrensburg (re-elected); delegate to the State Association, James I. Anderson, Warrensburg; censors: William G. Thompson, Holden, 3 years; E. Y. Pare, Leeton, 2 years; William E. Johnson, Warrensburg, 1 year.

LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society held its annual meeting at Lebanon, December 30. Those present were: Drs. J. G. Scott, President, J. W. Lindsay, J. A. McComb, T. B. Herbert, E. Saylor, J. M. Billings.

After reading the minutes of the previous meeting, a resolution was offered, changing the dues from five to eight dollars a year. After some discussion it was unanimously adopted.

A motion was made and carried that Dr. J. M. Billings be elected an Honor Member of the society and his dues remitted on account of long and faithful service. The motion was unanimously carried.

This being the annual meeting, the society proceeded to the election of officers for 1926 which resulted as follows: President, Dr. H. A. Hamilton, Lebanon; vice-president, Dr. J. A. McComb, Lebanon; secretary-treasurer, Dr. J. M. Billings, Lebanon. The president-elect appointed the following committees: Censors: Dr. J. G. Scott, Lebanon; Dr. J. L. Benage, Lebanon; Dr. T. B. Herbert, Lebanon. Program Committee: Dr. J. A. McComb, Lebanon; Dr. J. W. Lindsay, Conway; Dr. E. Saylor, Phillipsburg.

Dr. E. Saylor was appointed to read a paper on "Scarlet Fever" at the next meeting.

J. M. BILLINGS, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

At a recent meeting of the Lafayette County Medical Society the following officers for 1926 were elected: President, Lewis Carthrae, Jr., Corder; first vice-president, R. C. Schooley, Odessa; second vice-president, J. Q. Cope, Lexington; secretary-treasurer, Edmund Lissack, Concordia; delegate to State Association, E. M. Moore, Corder.

On account of bad roads in Lafayette County, regular meetings have not been held.

EDMUND LISSACK, M.D., Secretary.

NEW MADRID COUNTY MEDICAL SOCIETY

The New Madrid County Medical Society held a meeting Wednesday evening, December 9, at Parma. The meeting was called to order by the president, Dr. P. M. Mayfield. A very interesting paper on "Management of Typhoid Fever in the Home" was read by Dr. J. H. Cochran. Another excellent paper on the "Diagnosis and Treatment of Malaria" was presented by Dr. H. T. O'Kelley. An instructive paper was read by Dr. C. H. Pease on "Differential Diagnosis of Various Forms of Dementia." Judge E. J. Hoke, of Parma, kept the audience in merriment when he read a humorous paper on "Latest Topics of the Day."

The following officers were elected for 1926: President, C. S. Blackman, Parma; vice-president, C. McRaven, Marston; secretary-treasurer, W. N. O'Bannon, New Madrid; censor, J. H. Cochran, Gideon.

At the conclusion of a very enjoyable evening delightful refreshments were served.

The Women's Auxiliary met jointly with the members of the Medical Society on this occasion.

The following members and guests were present at the meeting: Dr. and Mrs. J. H. Cochran and Dr. and Mrs. Geo. W. Fulkerson, of Gideon; Dr. and Mrs. I. J. H. Dunaway and Dr. C. H. Pease, of Morehouse; Dr. and Mrs. J. D. Fakes and Dr. and Mrs. Wm. N. O'Bannon and Dr. W. L. Digges, of New Madrid; Dr. and Mrs. E. J. Ford, Dr. and Mrs. C. S. Blackman and Dr. and Mrs. B. L. Gray, of Parma; Dr. E. E. Jones, of Lilbourn; Dr. Claude McRaven, of Marston; Dr. P. M. Mayfield and Dr. H. T. O'Kelley, of Portageville; Judge E. J. Hoke, of Parma; Miss Jane Enloe, Nutrition Worker for State Board of Health, Jefferson City; Miss Dorothy Henley, County Nurse, and Mrs. H. G. Sharp, of New Madrid.

WM. N. O'BANNON, M.D., Secretary.

NEWTON COUNTY MEDICAL SOCIETY

At the December meeting of Newton County Medical Society the following officers for 1926 were elected: President, A. W. Benton, Neosho; vice-president, R. L. Wills, Neosho; secretary, D. E. Cullers, Neosho; delegate to the State Association, C. E. Maness, Neosho; alternate, A. W. Benton, Neosho.

PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met in regular session at 6:30 p. m. at Hotel Liberty, Sedalia, January 18. An excellent turkey dinner was served after which the meeting was called to order by President J. W. Boger.

Dr. C. C. Conover, of Kansas City, was the first speaker, his subject being, "Emboic Endocarditis." His talk was illustrated by lantern slides. Dr. J. H. Ogilvie, also of Kansas City, then read an interesting paper entitled, "The Thyrocardiac Crisis." Dr. Jabez Jackson, Kansas City, a former resident of

Pettis County, was asked to speak on any subject he chose. He gave a very interesting talk on "General Surgical Principles." Dr. Porter Williams, of Boonville, was another guest of the society and made a short talk.

Twenty-four members of the society were present.
A. L. WALTER, M.D., Secretary.

The Pettis County Medical Society met in regular session in the Chamber of Commerce rooms, Sedalia, Monday evening, December 21, 1925, at 7:30. President J. W. Boger called the meeting to order. The following members were present: Drs. D. P. Dyer, A. E. Monroe, W. T. Bishop, W. A. Beckemeyer, C. Bohling, J. E. Mitchell, A. J. Campbell, M. T. Collins, W. G. Jones, W. M. Wheeler, A. L. Walter, W. L. Bradford, W. J. Ferguson, J. W. Boger, C. A. McNeil, J. B. Carlisle.

After routine business was transacted Dr. Lattimore, of Topeka, was introduced and gave a very interesting talk on the "Use of Insulin in Diabetes." It is the intention of Dr. Lattimore early in January of the coming year to establish a first-class laboratory in Sedalia. A rising vote of thanks was given to Dr. Lattimore for his very interesting talk, after which the meeting was adjourned.

JOHN B. CARLISLE, M.D., Secretary.

PHELPS COUNTY MEDICAL SOCIETY

Phelps County Medical Society has elected the following officers for 1926: President, W. J. Durant, Rolla; vice-president, A. J. Walters, Rolla; secretary-treasurer, W. S. Smith, Rolla; delegate to the State Association, S. L. Baysinger, Rolla.

RANDOLPH COUNTY MEDICAL SOCIETY

At a meeting of the Randolph County Medical Society held on December 8, 1925, the following officers were elected for 1926: President, M. R. Noland, Moberly; vice president, J. Maddox, Moberly (re-elected); secretary-treasurer, F. L. McCormick, Moberly; delegate to State Association, G. O. Cuppaidge, Moberly; censor, L. O. Nickell, Moberly.

The Randolph County Medical Society held the regular January meeting in the Library Bldg., at Moberly, Tuesday, January 12, 1926, with the President, Dr. M. R. Noland, in the chair.

Due to the bad roads and weather only a few were present, viz.: Drs. M. R. Noland, T. S. Fleming, G. O. Cuppaidge, L. E. Huber, D. A. Barnhart, R. A. Mitchell, L. A. Bazan, R. D. Streeter, J. Maddox and F. L. McCormick.

Applications of Dr. C. C. Smith, of Monroe County, and Dr. W. A. Davis and Dr. J. B. Stokes, of Macon County, to transfer to Randolph County were read and approved, and the secretary instructed to write them that they must get consent of their county society and pay up all back dues and then our county would gladly welcome them.

Application of Dr. O. O. Ash to become a member was voted upon and accepted, thus completing the business session.

A round table discussion on "Typhoid Fever" proved very interesting and instructive. The following members that were present had been assigned for short talks on the subject:

Dr. Fleming, "Differential Diagnosis." Dr. Streeter, "Surgical Treatment for Perforation." Dr. Bazan, "Hygienic Care of Patients." Dr. Huber, "How Do You Control the Fever?" Dr. Barnhart, "What Medicine Do You Give?"

All gave excellent talks on the subject. A general discussion followed and much interest was shown.

The meeting adjourned to meet the second Tuesday in February at 8:00 p. m. in the Commercial Club Rooms of the Library Bldg., Moberly.

F. L. McCORMICK, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was held Wednesday, January 13, at 3 p. m., in the Directors' Room of the Webster Groves Trust Company, Dr. J. A. Townsend, the president, in the chair. The minutes of the November and December meetings were read and approved.

A motion was made by Dr. C. P. Dyer and seconded by Dr. J. H. Armstrong that a committee of two be appointed to plan the program for the year with reference to compelling attendance and taking part in the program. The motion was carried and Dr. Dyer and Dr. Armstrong were appointed.

Resolutions of the Adams County Medical Society regarding the surplus of physicians in Quincy, Illinois, were read and filed.

A motion was made, seconded and carried that the scientific teams be referred to the regular program committee and a report be made at the next regular meeting.

Dr. J. H. Armstrong made an appeal for the united support of the county physicians for Bethesda Dilworth Hospital. He also discussed fee-splitting either direct or indirect and deplored the fact that something was not done to abolish it.

It was moved and seconded that a committee of three be appointed to go before the county court and urge the appointment of a member of the St. Louis County Medical Society as health commissioner. The motion was carried and the following were appointed: Chairman, Dr. O. W. Koch, Dr. J. H. Sutter, and Dr. A. W. Westrup.

The members present were: Drs. Garnett Jones, Carl C. Irick, Otto W. Koch, Horine Miles, Henry N. Corley, John H. Sutter, John H. Armstrong, Wm. F. O'Malley, Marshall Baker, E. E. Tremain, Frederick C. E. Kuhlmann, James A. Townsend, and Clyde P. Dyer.

CLYDE P. DYER, M.D., Secretary.

VERNON-CEDAR COUNTY MEDICAL SOCIETY

The Vernon-Cedar County Medical Society held its regular co-operative meeting at State Hospital No. 3 in Nevada, Thursday, November 19. Thirty-five physicians were in attendance from the following counties: Bates, Cass, Jackson, Cole, Henry, Cedar, Dade, Barton, St. Francois and Vernon.

Drs. Jabez N. Jackson and Sam Snyder, of Kansas City, and Drs. James Stewart and Geo. Johns, of Jefferson City, were on the program.

Dr. Snyder lectured on "Tuberculosis." Dr. Jackson lectured on "Appendicitis." Dr. Johns lectured on "Insanity." Dr. Stewart lectured on "Vital Statistics."

For four hours the gentlemen held the undivided attention of every one present, including the Ladies' Auxiliary who visited us after their meeting had adjourned.

The ladies selected the following officers for 1926: President, Mrs. J. M. Yater; vice president, Mrs. E. R. King; secretary, Mrs. G. W. Freiday.

At the conclusion of the scientific program the doctors and their wives were the guests of Doctor and Mrs. Bruton at an old fashioned goose dinner, with all the accompaniments. Music by the orchestra was enjoyed while the dinner was served.

We were so busy with the goose and ham, etc., that we did not notice the table, but someone told me it was arranged in a Maltese Cross and that it was beautifully decorated with black candles, yellow chrysanthemums and roses, and at each plate was a tiny yellow basket filled with sweets.

This was one of the best meetings in the history of the society and we all went away feeling it was good to have been there.

Those present: Drs. Sam Snyder and Jabez N. Jackson, of Kansas City; Drs. James Stewart, Geo. Johns and Viola Johns, of Jefferson City; Drs. W. S. Walker and R. D. Haire, of Clinton; Dr. H. A. Rhodes, of Foster; Drs. W. H. Popplewell and C. E. Duckett, of Lamar; Dr. W. E. Baggerly, of LaHue; Dr. W. H. Sitton, of Jerico Springs; Dr. Arnett, of Farmington; Dr. J. W. Dawson, of Eldorado Springs; Dr. G. B. Morrison, of Richards; Dr. C. B. Davis, of Walker; Dr. C. L. Keithley, of Milo; A. G. Althem, of Sheldon; Drs. Amerman, Bruton, Craig, Combs, Dulin, Freiday, Fuson, Holmes, Hummell, King, W. S. Love, McLeomore, Smith, Todd, Yater and Willson, of Nevada.

J. T. HORNBACK, M.D., Secretary.

The Vernon-Cedar County Medical Society has had a very profitable year. There were 7 regular and 1 called meetings held; 16 scientific lectures were delivered; the average attendance was 28; 70 clinical cases were examined; 5 surgical operations were performed; the average expense of each meeting was \$12.00, not including the cost of 3 banquets; came within 1 of securing a place on the Honor Roll; lost 3 members by death, namely, Drs. Bohannon, Callaway and Curl. The spirit is good and the outlook for 1926 is fine.

We are proud to be able to make such a good report and we question if any society in the state can show a better one, with possibly the exception of Clay County Society, whose doings are so fluently reported by the silvery pen of "Uncle John" Gaines.

J. T. HORNBACK, M.D., Secretary.

WOMAN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.

Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.

Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.

Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.

Treasurer, Mrs. C. T. Ryland, Lexington.

Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.

Chairman of Finance, Mrs. John C. Parrish, Vandalia.

Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.

Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

Attention has been called to a state project that deserves and should have our cooperation. The child hygiene department of the state board of health has inaugurated, under Miss Pearl McIver, of that department, a Health Poster Contest for the school children of the grade schools of the state. Several auxiliaries are offering small cash prizes for

the best posters and are otherwise cooperating with county superintendents and teachers in having the children enter this contest.

The State Chairman of Legislation of our Auxiliary, Mrs. George E. Bellows, believes it would help as, and all other citizens as well, if all were more familiar with the provisions made for physical education by the state through our state department of education. That you may know how comprehensive these provisions are, and what aid to the welfare of the children is possible, Mrs. Bellows desires you to read and hopes you will discuss the following statute providing for this division of our state department of education:

Provision for Physical Education Law of 1921

Section I. To promote the physical development of boys and girls in our public schools, and the correction of their physical defects and impairments, to secure proper health habits, and to secure scientific sanitation in the schools, the state superintendent of public schools is hereby authorized and directed:

1. To adopt and promulgate such rules and regulations as he may deem necessary to secure courses in physical education to all pupils and students in all public schools and in all educational institutions supported in whole or in part by the state.

2. To compile and print a manual of physical education and health supervision and school nurse service to be distributed for use by the teachers, supervisors of physical education, school health supervisors and school nurses of the state.

3. To appoint a state director of physical education who shall, under the direction of the state superintendent of public schools, see that all rules and regulations relating to physical education, health habits, school sanitation, and playground activities and athletics are carried out, and to authorize such expenditure for travel as he may be deemed necessary to carry out the provisions of this act.

BUTLER COUNTY AUXILIARY

The ladies are quite enthusiastic over our new Auxiliary and we feel sure had we been organized some time ago that the women's part of this convention of the Southeast Missouri Medical Association would not have failed as we feel this one did.

We arranged for fifteen ladies and had a committee at the Elks' home to meet them and you may know we were disappointed when none arrived.

That night at six o'clock the doctors had their banquet at the Dunker Hotel where most of the local doctors and their wives were present. Three women from out of town had accompanied their husbands: Mrs. Van Cleve, of Malden; Mrs. Cannon, of Farnfeldt; and Mrs. Martin, of East Prairie.

On Wednesday morning it poured rain but nine ladies and two visiting ones met as we had planned at the home of Mrs. Hendrickson to organize our Auxiliary. Mrs. Knecht was requested to take charge of the meeting and Mrs. McPheeters to act as secretary. Mrs. Mott read the constitution and by-laws which had been prepared by her committee which included Mrs. Spaulding and Mrs. Brandon. These were accepted as read.

The following officers were elected: President, Mrs. L. B. Knecht; vice president, Mrs. Wm. Spaulding; secretary-treasurer, Mrs. J. W. McPheeters.

We are quite enthusiastic and feel we did all we could to make it a success. We were very much pleased with the spirit that was shown by the ladies

and also by the way the Auxiliary was received by the doctors.

We had a tea at Mrs. Spaulding's the afternoon following our meeting and invited our husbands, and had a jolly good time.

ALLIE BUGG MCPHEETERS.

BUCHANAN COUNTY AUXILIARY

Mrs. A. B. McGlothlan, St. Joseph, President of Buchanan County Auxiliary, sends the following report:

I must let you know that we have not fallen asleep. I gave a tea at my home for the Auxiliary. Seventy-two doctors' wives, not all members, attended and seemed most interested. We had a joint meeting with the doctors and had Dr. Herman Pearse, Health Commissioner, of Kansas City, address us. We have a number of interesting committees which are working. One of our most active members is chairman of education in the P. T. A. Council, and another is chairman of literature. I have appointed the former to get *Hygeia* on the Circle programs, and the latter to get subscriptions from the Circle of the P. T. A. for their respective school libraries.

We are sending *Hygeia* to every rural school in the county and about 200 subscriptions to city school teachers. We have raised the money for this ourselves. The county superintendent is giving us wonderful co-operation and invited me to make a talk to the rural teachers. I told them why we had sent them *Hygeia* and suggested ways in which they could use it. I am working out a plan for co-operation in the city schools and also for a big poster contest that will include much Auxiliary publicity, culminating with a May Day celebration, which day has been set aside as National Health Day.

CAPE GIRARDEAU COUNTY AUXILIARY

Twenty members of the Auxiliary with an average attendance of twelve is the good report from Cape Girardeau County. The program committee sees that two papers or talks are provided for each meeting. Each member has adopted one or two rural schools which she endeavors to help in bettering conditions.

The Auxiliary voted to sponsor the Health Poster Contest inaugurated by the State Board of Health, and is also working for the extension of the circulation of *Hygeia*. Mrs. B. W. Hays, of Jackson, is president and Mrs. O. L. Seabaugh, of Cape Girardeau, is corresponding secretary.

SALINE COUNTY AUXILIARY

The Women's Auxiliary of this county effected a delightful New Year's party at the Fitzgibbon Hospital in Marshall, where a silver tea was given both afternoon and evening of January 1 to several hundred guests. The Auxiliary thus made it possible for the public to meet the new superintendent, Mrs. M. Crocroft, and the new nurses. In the receiving line were also the members of the Board of Managers of the Hospital. The Woman's Auxiliary initiated the reception and supplied the committees on decorating, refreshments and music, and so insured its success. They had, however, the hearty co-operation of all business firms and persons who could assist these various committees. The "silver offering" goes toward the needed furnishing of a nurses' living room in the Hospital.

CASS COUNTY AUXILIARY

At the meeting of the Cass County Auxiliary in December the chief topics for discussion were the Health Poster Contest and the Division of Physical

Education of the State Department of Education. The Auxiliary is sponsoring the Health Poster Contest in the county with the hearty co-operation of the county superintendent of schools, Miss Elizabeth Collier. It wishes to co-operate also in every way possible with the physical education program of Dr. Henry Curtis, the State Director of that department. The president of the Cass County Auxiliary, Mrs. A. H. Baldwin, has presented the subject to the schools of Pleasant Hill and as a result the school children by contributing five cents each have raised the quota of \$25.00 suggested by Dr. Curtis for the support of this work omitted, we hope for the last time, in the appropriations of our last legislature.

CLAY COUNTY AUXILIARY

The December meeting was held at the Major Hotel in Liberty, December 17. It began with a dinner at six-thirty o'clock for both the Clay County Medical Society and the Auxiliary. Following this each organization held its own meeting. After the business of the Auxiliary was disposed of, an entertaining program of music, readings and a book review was enjoyed. The President, Mrs. W. H. Goodson, expresses her appreciation of the information in the Auxiliary Department of the December Journal.

JACKSON COUNTY AUXILIARY

Mrs. A. W. McAlester, President of the Jackson County Auxiliary, reports that work will begin at once on the Health Poster Contest. Meetings are held the first Friday of each month. The programs are varied with lectures, social meetings, book reviews, etc. A benefit is planned the proceeds of which will be used to place *Hygeia* where it will have the most influence for good. Not only the Auxiliary but the medical society of Jackson County is actively supporting the physical education program of Dr. Curtis.

The County Health Unit of Jackson County

The county health unit idea has taken root in an encouraging way in Missouri. Under the work of Dr. James Stewart, State Health Commissioner, and Dr. Joseph W. Mountin, representative of the United States Public Health Service and of the Rockefeller Foundation, the units are increasing about as rapidly as the state appropriation is making possible.

Efficiency of the units, however, after they are once organized will depend upon the co-operation and backing of an informed and intelligent local public. The people of Jackson County, particularly those living in Kansas City, seem to realize this and the fact augurs well for the Jackson County Unit.

In January, 1925, the county health unit plan was presented to practically all the civic and welfare organizations in Kansas City, to the federated women's clubs, the parent teacher associations and to such organizations as the Merchant's Association, and the Chamber of Commerce. The result was that petitions signed by members of the executive boards of practically all of these organizations went to the county court asking the court to organize the county unit.

It was without doubt this pressure from Kansas City which induced the court to organize the Jackson County Unit, in spite of the fact that while Kansas City pays ninety per cent. of Jackson county taxes, and therefore ninety per cent. of the expenses of the county health unit, the work for disease prevention and health protection done by the unit is all outside Kansas City. And Kansas City so realizes its dependence on health conditions outside its own

limits, and the value to itself of sanitary rural surroundings, that the clubs and organizations which a year ago asked for the unit are now after studying the report of the unit's work during its first year petitioning the county court to increase the annual appropriation \$5,000 and add two workers to the unit's personnel.

In 1924 less than twelve per cent. of the rural communities of the United States had anything like adequate health protection. When cities and towns come to realize, as Kansas City seems to realize, that city limits are no bar to disease germs they will demand as good sanitary conditions for the country around them as they are now demanding for themselves inside their city limits. When that time comes rural communities will have as good a chance of normal development as most city children now have.

GENTRY COUNTY AUXILIARY

The Women's Auxiliary of the Gentry County Medical Society held a very interesting meeting with the president, Mrs. W. T. Martin, on December 15. After the business session various plans for the future were discussed.

Dr. and Mrs. Martin delightfully entertained the Gentry County Medical Society and the Women's Auxiliary with a Christmas party. The decorations in the reception room were in keeping with the yuletide season and gave a very pleasant effect. An interesting program was given during the afternoon consisting of piano numbers by Mrs. Martin and Mrs. Carl Gillespie, vocal solos by Mr. John Lamer, and short talks by several physicians. Delicious refreshments were served.

MRS. J. N. BARGER, Corresponding Secretary.

BOOK REVIEWS

L' OEDÉME. Etude expérimentale et clinique. By J. Le Calvé. 1 volume de 648 pages. Masson et cie, Editeurs, Librairie De L' Académie De Médecine, 120, Boulevard Saint-Germain, Paris. 1925. Price 36 fr.

This book on edema consists of two parts. In a first part of approximately 200 pages the theory of edema and its experimental basis are discussed, while in the second part more than twice as large a discussion of edema from the clinical viewpoint is given. It would therefore represent the most complete work on edema were it not for the fact that the author considers almost exclusively French investigators and disregards to a very large extent the literature of other countries. It is true he mentions a few of the older German writers on edema, but the important work done in the last twelve years in this country, in Germany, Holland, Italy and elsewhere has been disregarded. As far as the older literature is concerned, this is perhaps not quite so serious as it might seem to be, because in the course of time the workers of one country in their own work incorporate to some extent the publications of foreign authors, even if they do not always mention them by name. But such a diffusion of knowledge has not yet taken place as far as the important publications of more recent date are concerned.

As to the theoretical part of the book the author differs from other writers in this field mainly in the view that edema in general is due to a vasomotor reflex which originates in the place where later edema develops and is transmitted by the vasomotor nerves to the central nervous system. As a result of this stimulation a dilatation of the peripheral vessels occurs which is followed by the passing of

an excess amount of fluid from the vessels to the interstitial tissue spaces, where it is retained. Thus edema results. Now it has been stated by a previous writer that there is good ground for the conclusion that a dilatation of the smaller vessels is associated with an increased permeability and an increased formation of interstitial tissue fluid and that this occurrence is an important factor in certain kinds of edema. Le Calvé differs from this view, however, in several respects, namely (1) in the manner in which he believes this dilatation is brought about; (2) in the belief that it is a general occurrence underlying every kind of edema and representing the one indispensable factor in edema. Another view which has been expressed in a recent monograph on edema regards the regulation of water distribution as a connected mechanism consisting of systems of chain reactions and edema as a disturbance of this mechanism, which may take place at one or the other point of the mechanism, an interference which is especially effective if it takes place at several places concomitantly. According to this interpretation a considerable number of factors and especially a combination of factors may be responsible for edema; and it is not one single factor which must be considered as the real cause.

Le Calvé is led to his conclusions mainly on the basis of experiments in which he studied the changes taking place in the blood after discharge of ascitic fluid, after application of a bandage around an extremity, or around the ear of a rabbit, or after a hot bath. Under these conditions he finds changes affecting the whole circulation and especially the exchange of substances between tissues and blood vessels. He also refers to similar changes after injection of indol and scatol and in shock. He gives detailed protocols of his experiments which are of great interest. But Le Calvé proceeds to extend this point of view to all kinds of edema. Thus he assumes that the retention of sodium chloride which is of significance in the development of renal edema acts in the main by calling forth the vasomotor reaction in certain vascular areas and thus produces edema. In a similar way he claims this mechanism to be responsible for cardiac and starvation edema, however, without advancing any definite proof for these conclusions.

It does not seem to us that the evidence which the author adduces is sufficient to make his thesis probable. On the contrary, it has been shown, for instance, in the case of inflammatory edema, that it can be produced even in denervated areas of the body, under conditions therefore, under which the vasomotor reflex can be excluded. As a natural corollary of his views he apparently underestimates the graded changes in permeability of the vessels which are the cause of inflammatory edema and which grade the size of protein molecules which it permits to pass through the vessel wall. Instead he attributes the fibrinogen found in inflammatory edematous fluid to the leukolysis taking place outside the vessel. Furthermore he is inclined to assume toxic actions, under conditions where increased filtration due to strong back pressure is a sufficient explanation, as for instance, in the case of pulmonary edema caused by injection of adrenalin in rabbits.

While this book can not be considered satisfactory as a general presentation of edema, it is an excellent summary of the French literature on this subject. It is written with great lucidity. While in the opinion of the reviewer the experimental data brought forth by the author do not have the general significance, which the author attributes to them, they are in themselves interesting, their connected presentation to a wider public will be stimulating, but

further work must show how far their importance reaches. The second part of the book should be of great value to all internists in medicine.

LEO LOEB.

OBJECTIVE PSYCHOPATHOLOGY. By G. V. Hamilton, M.D., Director of Psychobiological Research, Bureau of Social Hygiene, Inc., New York City. St. Louis, C. V. Mosby Company. 1925. Price \$5.00.

There is a sense of satisfaction in studying Dr. Hamilton's observations on two hundred clinical cases of neuro-psychiatric affections because he has honestly tried to base his deductions on what he has observed in nature.

He has obviously been sitting a bit too close to the dripping eaves of the Freud Sanctuary but he steps out quite boldly in many places and gives expression to opinions quite at variance with those of him whose devotees speak reverentially as "The Master." The last sentence of the book gives a good clue to the way Dr. Hamilton's view of psychopathology conflicts with that of Freudians which we know. "If the uprising generation is told that thriftily saving money or defending the property rights of others or inventing new things or attacking evil customs are mere sublimations of psychical energies which were initially directed toward obtaining the satisfactions derived from anal eroticism, imaginary father-castrations, incestuous activities, demonstrations of sexual virility and finally achieved heterosexual successes they will have, it seems to me, a very poor philosophic substitute for a truly biologic outlook on life."

To those whose interests lie in gaining an insight into rather common nervous deviations we would recommend a careful reading of this book. It has a rational and hopeful attitude toward a field in biology much in need of cultivation rather than fertilization.

M. A. B.

SERUM DIAGNOSIS OF SYPHILIS BY PRECIPITATION. Governing Principles, Procedure and Clinical Application of the Kahn Precipitation Test. By R. L. Kahn, M.S., D.Sc., Immunologist, Bureau of Laboratories, Michigan Department of Health. Baltimore. Williams and Wilkins Company. 1925. Price \$3.00.

For the last few months the Kahn Test has achieved sufficient popular favor to warrant the comprehensive history and survey of the subject that the author presents in this volume. This test is essentially an improvement in the Weinicke and Sachs-Georgi reactions by use of a new extract containing more lipoids and by shortening the time of the incubation. The author finds that as a diagnostic test, i. e., with sera yielding strongly positive or negative reactions, the results compare favorably with the Wassermann reaction. This seems to be confirmed by other workers. The claim that the Kahn Test is more sensitive than the Wassermann is not so generally accepted.

The book is well arranged and well printed and should prove of value to laboratory workers in this field.

R. L. T.

THE EMOTIONAL LIFE OF THE CHILD. By Helga Eng. Translated by George H. Morrison, M.B. (Edin.). Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$6.50.

Working with a plethysmograph Helga Eng studied how far the different psychical processes were accompanied by definite changes in the volume-pulse curve and the respiration.

The observations cover attention, psychical work,

and the two combined. Stimuli which cause displeasure, spontaneous displeasure emotion, displeasure and excitement, and the opposite conditions were studied as were intellectual and esthetic emotions. The results are recorded in numerous charts and graphs.

The work is a substantial contribution to the physiology of the influence of the mind on the body, both in children and adults. M. A. B.

A PRACTICE OF GYNECOLOGY. By Henry Jellett, M.D., (Dublin University), F.R.C.P.I. Consulting Obstetrician to the Department of Public Health of New Zealand; consulting Gynecologist, Rotunda Hospital, Dublin, etc. Fifth edition. Lea & Febiger. Philadelphia and New York. 1925. Price \$8.50.

This volume and recent addition to the English medical literature is of unusual merit to student and practitioner in several respects. The chapter on menstruation and its disorders is broad in its scope and brings to date the latest theories and principles concerning so difficult a subject from the experience and investigation of several of the best known students. The chapter dealing with the bladder and urethra is of great interest to the gynecologist and deals more fully with that subject than most works on gynecology. The subject of displacements is admirably treated from causation to correction, the development being clearly portrayed. The extensive and difficult field of pelvic neoplasms and inflammation is carefully written and well illustrated grossly and microscopically. Sterility, though a difficult subject to handle, is comprehensively considered with a thought to the latest diagnostic measures which are of greatest importance in arriving at a prognosis. A chapter on vaccine therapy is of interest in view of the increasing importance of medical and conservative gynecological treatment. An exhaustive chapter on radiotherapy goes deeply into the physics and dosage of that important branch of treatment. The portion of the book devoted to indications and technique of operations is carefully presented and well illustrated. The chapter dealing with the surgical anatomy of the genital organs is most instructive and can not be too frequently reviewed by the operating gynecologist.

The book as a whole is a valuable addition to gynecological literature and worthy of not only reading but study. O. S. K.

OCULAR THERAPEUTICS. By Doctor Ernst Franke, A.O. Professor of Ophthalmology and Chief of the Second Eye Clinic at the University of Hamburg. Translated by Clarence Loeb, A.M., M.D., Oculist to the Michael Reese Hospital, Chicago, Ill. St. Louis. C. V. Mosby Company. 1925. Price \$3.50.

This book "is something more than a condensed epitome of what a reader might know if he could remember all he had read about ocular therapeutics." It is something more than a reference book. It contains a fund of valuable information which one should ever have at ready command. C. A. H.

ALLERGY. Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction. By William W. Duke, Ph.B., M.D., Kansas City, Missouri. With Seventy-five illustrations. St. Louis. C. V. Mosby Company. 1925. Price \$5.50.

This book is written in a plain understandable form that should appeal to the physician who wants a simple statement of the known facts of allergy without being burdened with too much of the theoretical discussion. There is appended an unusually

good bibliography, which is of great value to the student.

The text is amply illustrated with good pictures and numerous case reports. It should prove helpful to those who are interested in doing the tests and contains valuable hints as to diagnosis and therapy. The technique of doing the tests and their interpretations are well described. The book can be recommended as giving valuable information on this still new and important field in medicine and the reader will be amply repaid by its perusal. J. A. R.

LOESER'S INTRAVENOUS SOLUTION OF SODIUM THIOSULPHATE Not Accepted for N.N.R.—Loeser's Intravenous Solution of Sodium Thiosulphate (New York Intravenous Laboratory) is marketed in ampules of 10 c.c., said to contain 1 gm., of sodium thiosulphate, U.S.P. The Council on Pharmacy and Chemistry reports that according to the advertising, this preparation is to be used in "arsenical dermatitis, mercurial stomatitis, bichlorid poisoning, skin diseases" and "Arsphenamin Dermatitis, Metallic Poisoning, Skin Diseases." The Council explains that, whereas the tenor of the advertising is to the effect that the use of thiosulphate in these conditions is supported by equal evidence, this is essentially misleading; for the evidence of its efficiency against arsphenamin dermatitis is very much stronger than that for other "metallic toxemias." The Council cautions that reliance should not be placed on thiosulphate in mercury poisoning to the neglect of other measures. The same caution applies to the use of thiosulphate in poisoning by other metals, except that the evidence for these is even more scanty. The Council calls attention to other claims of a general character which are likely to mislead. There is, in the first place, the general claim that the intravenous solutions of this particular firm are superior to those of other firms; but there is no evidence for such claims. Finally, but most seriously, this firm through its house organ, *The Journal of Intravenous Therapy*, misrepresents the general status of intravenous therapy. Statements which are made in the firm's advertising are distinctly misleading as to the real field for intravenous therapy and serve only to discredit that method of administration. The Council finds Loeser's Intravenous Solution of Sodium Thiosulphate inadmissible to New and Nonofficial Remedies because misleading and unwarranted claims are made for it in the advertising of the New York Intravenous Laboratory. (*Journal A. M. A.*, April 25, 1925, p. 1289.)

A study made by John H. Arnett, Philadelphia (*Journal A. M. A.*, Sept. 26, 1925), of the vital capacity in thirty-two cases of pneumonia, delayed resolution and empyema, yielded the following data: In pneumonia, the vital capacity is greatly reduced early in the disease. The determination may therefore be of distinct diagnostic value in doubtful cases. The greatest reduction generally occurs shortly before the crisis. The advent of the crisis may therefore at times be predicted in advance. Cases of uncomplicated pneumonia almost constantly exhibit a rapid rise in the vital capacity in the first five to ten days from the crisis. Patients with empyema and delayed resolution do not exhibit such a rapid rise. The vital capacity may therefore assist in diagnosing empyema or unresolved pneumonia. The vital capacity increases gradually for months after clinical recovery from pneumonia or empyema has occurred. In many cases it probably never entirely returns to normal.

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ORIGINAL ARTICLES

REMEDIAL LAWS IN RELATION TO PUBLIC HEALTH*

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It is a well recognized principle that the protection of the public health is one of the first duties of government. It is as much for the interest of the state that the public health should be preserved as that life should be made secure. Therefore, whatever rationally tends to promote and preserve the public health is an appropriate subject of legislation.

The criterion is whether the public health in general will be promoted and not whether it is required to promote the public health in isolated cases. When the object of the enactment is to promote the public health there is no constitutional invasion even if the enforcement of the law interferes to some extent with liberty or property.

The state legislature may provide for the establishing of boards of health, or the appointment of health officers, and this both for the state at large and for local subdivisions of the state.

BOARDS AND OFFICERS

Boards of health are regarded as administrative bodies, and not judicial, notwithstanding the statute providing that the actions, proceedings, authority and orders of such boards shall be regarded as in their nature judicial. They are governmental agencies endowed by law with distinct legal rights. They act for the public and not as agents for the local authorities. A board of health has been said to be a legal entity, of the nature of a political or public corporation, but not a corporation. However, in some jurisdictions boards of health are expressly made bodies corporate.

The manner of selecting health officers is within the discretion of the legislature, and it

may change the same at its pleasure. The appointment of boards of health and other health officers must be according to law.

The power of boards of health to appoint subordinate officers is not inherent. Such power, however, need not be expressly conferred by statute but may arise by implication, as for instance, from a provision granting to the board the power to make by-laws for the regulation of the action of the board, its officers and agents, in the discharge of their duties.

POWERS AND DUTIES GENERALLY

Boards of health or other sanitary authorities have no inherent legislative power. They have only such powers as are conferred on them either expressly or by necessary implication. While they are frequently given authority over things which are not injurious to the public health, but merely offensive to the senses or injurious to property, yet in the absence of such statutory extension of their powers they cannot take cognizance of matters not affecting the public health.

Powers conferred upon boards of health to enable them to perform their important functions in safeguarding the public health effectually shall receive a liberal construction but in determining whether power derogatory of the common law rights are conferred, the rule of strict construction should be applied and a health order or regulation which assumes to create an offense punishable by the criminal law should be strictly construed.

The rule is generally recognized that within certain limits boards of health, both state and local, or similar health authorities, may be invested by the legislature with the power of making rules and regulations for the protection of the public health, and when rules and regulations are duly adopted by virtue of legislative authority they have the force and effect of law within the districts over which the jurisdiction of the board extends. It becomes the duty of all persons affected thereby to obey the same, for a violation of these rules or regulations may subject the offender to a criminal prosecution or a penalty.

Health authorities cannot, by the operation

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of their rules and regulations, enlarge or vary the powers conferred upon them by the law creating them and defining their powers, and any rule or regulation which is inconsistent with such law or which is antagonistic to the general law of the state is invalid. So the power to make rules and regulations must be exercised reasonably and without discrimination. Whether an order is reasonable or unreasonable is a judicial question. Before an ordinance or regulation of the board of health can be said to be unreasonable, however, it should clearly so appear.

Health boards must act as a body and not separately, and when so acting they may ratify and adopt the individual acts of their members if such acts are within the board's authority.

As a general rule it is the duty of boards of health to take such action as in the exercise of reasonable discretion may be deemed necessary to suppress and prevent the spread of infectious and contagious diseases. What boards of health shall do to prevent epidemics and how it shall be done are matters left to their sound discretion; and while this discretion will not be interfered with unless plainly abused, they cannot adopt unreasonable or arbitrary rules or regulations. To justify their action they should believe that reasonable grounds exist for the necessity of preventing or suppressing diseases. The method adopted or exercised to prevent the spread of the disease must bear some true relation to the real danger.

A board of health is without jurisdiction to adopt a resolution placing the charge of all contagious diseases under the exclusive control of its health officers and forbid any other person from attending upon them; such boards cannot prevent citizens from selecting their own means to cure such diseases provided the means are reasonably calculated to accomplish that purpose. A statute authorizing health officers to quarantine a person afflicted with a contagious disease has been held not to prohibit treatment by a private physician while in quarantine.

Under a general power to preserve the public health and to make regulations for that purpose, health authorities may prevent the assembling of people and close public places during the existence of a contagious disease in the community.

The legislature may by express provision require or delegate to local or administrative authorities the power to require the vaccination of persons in places where smallpox exists or its outbreak is apprehended. But even without express provision to that effect it will be a good defense to the requirement of vaccination that it would be unsafe to submit to it by reason of

the special condition of the health of the individual.

The legislature has power to pass general laws in the nature of health regulations relating to the vaccination of students entering state educational institutions.

Power of the legislature to enact quarantine laws has been recognized in many decisions, and as an incident thereto the power to detain persons infected with, or exposed to, contagious diseases, although to a certain extent the exercise of the power may necessarily affect interstate and foreign commerce.

Boards of health may be invested with authority by the legislature to make general regulations and special orders for the suppression of nuisances or conditions interfering with the public health.

The duty may be imposed on boards of health of supervising and making complete the registration of births and deaths within the limits of their jurisdiction.

MISCELLANEOUS POWERS AND REGULATIONS

Various rules or regulations have been enacted for the purpose of preserving the public health and have received judicial approval, such as prohibiting the sale of adulterated or unwholesome milk, or milk not conforming to a specified standard; prohibiting the sale of milk from diseased cows or from cows that react to the "tuberculin test"; prohibiting or regulating the manufacture, use and sale of cigarettes; prohibiting the sale of snuff; prohibiting bathing in a pond from which the city derives its water supply; prohibiting fishing on a body of water used as source of water supply; prohibiting unmuzzled dogs to run at large; requiring licenses for cleaning cesspools; prohibiting the cooking of garbage in open places; requiring the owners of apartment or tenement houses to furnish proper receptacles for garbage and other rubbish; regulating public lavatories or washrooms; prohibiting the use of roller towels in public lavatories; forbidding a fireman to allow smoke to escape from his locomotive; prohibiting the distribution of medical preparations from house to house; prohibiting the distribution of trial samples of medicine by leaving them exposed so that children may become possessed thereof; requiring the purification of sewage and public water supplies; regulating the plumbing connecting buildings with sewers, water mains and gas pipes; requiring the plans for plumbing and drainage systems to be filed with the board before the work is done; regulating the deposit of decayed animal matter; regulating the burying or removal of dead animals; prohibiting the leaving of the dead carcass of

a horse on or within a certain distance of a public road or highway.

The ordinary ways by which the orders or resolutions of health authorities are enforced are by penalties, criminal prosecutions, injunctions, and, in cases of nuisances by abatement.

The board of health has also the right to revoke its licenses where its regulations have been violated, although the violation of the regulation may also be a misdemeanor; and the action of the board in revoking its licenses will not be disturbed by courts except where it is arbitrary or unreasonable.

The foregoing is a brief reference to the general law relative to the powers and duties of public health boards. We will now advert to a brief recital of the legislative history of public health legislation in Missouri.

The first legislation on the subject of the practice of medicine and surgery in Missouri was enacted by the legislature in 1874.

The act of 1874 required all persons, before practicing medicine and surgery in this state, to have received a degree of doctor of medicine from some medical college or university duly established under and by virtue of the laws of the state or county in which it was situated, and required every such person before commencing the practice to file a copy of his or her diploma in the office of the county clerk in the county in which he or she resided, which copy was required to be subscribed and sworn to.

Said act further provided that all persons then practicing medicine or surgery in the state register their names in the office of the county clerk of the county in which they resided, but were not required to file copies of their diplomas. Failure to comply with the foregoing requirements was made a misdemeanor. Any one who failed to so register but continued to practice could not enforce the collection of his fee for services rendered.

The act expressly exempted women who practiced midwifery for pay from such registration or securing a diploma.

In 1875 a new section was added to the act of 1874 which permitted one who had practiced in this state during a period of ten years but who was absent from the state on the first day of September, 1874, to register on his return to the state, provided that the applicant should file with the county clerk an affidavit setting forth the fact of such absence and former practice. This act also authorized medical students who had attended one full regular course of lectures in a medical college of good standing, established under the laws of this state, to practice medicine and surgery under the instruction of a preceptor.

In 1877 the act of 1874, as amended, was

repealed and a new act enacted in lieu thereof which was virtually identical with the former act, with the exception that it made it the duty of the circuit and county attorneys to prosecute all violations of the provisions of the act and required the judges of courts having criminal jurisdiction to give the same in charge to grand juries within their respective districts.

As an interesting side light to the legislative history under consideration, the legislature in 1879 passed a special act licensing one Henry K. Legg, of Barry County, predicated on an experience of thirteen years as a practicing physician and army surgeon, who failed to register as a practicing physician on the first day of September, 1874, owing to the fact that he was at that time engaged in other pursuits. The act conferred upon him the same rights and immunities enjoyed by those who had registered under the act of 1874.

The State Board of Health of Missouri was created by the legislature in 1883. The members were then, as now, appointed by the governor by and with the advice and consent of the senate and consisted of seven members, as it does now. Their term of office was then seven years; it is now four. It required that at least five of said members should be physicians in good standing and graduates of reputable medical schools, and residents of the state at least five years preceding their appointment. This is the requirement of the present law.

The board was given general supervision over the health and sanitary interests of the citizens of the state, power to establish quarantine regulations, establish such rules and regulations as it deemed necessary to prevent the introduction and spread of contagious diseases, and supervision of the registration of births and deaths under the superintendency of the secretary of the board. It provided that the board should meet in January and July of each year and at such other times as the board deemed expedient, the meetings in January of each year to be held in Jefferson City; and that four members should constitute a quorum; that they choose from their number a president, a vice president and a secretary, as the present act requires. It provided for a salary for the secretary to be fixed by the board, and for his traveling and other expenses in the performance of his official duties. The other members of the board were allowed only their traveling and other expenses while employed on the business of the board.

It was also made the duty of the board to take cognizance of any fatal diseases which became prevalent among domestic animals of the state and publish the result of its investiga-

tions with the suggestions for treatment of such animals.

It was also made the duty of the board to make an annual report through its secretary in writing to the governor on or before January of each year, giving him information concerning vital and mortuary statistics, and such suggestions as to legislative action as they deemed necessary.

The sum of six thousand dollars was appropriated to pay the secretary and meet the contingent expenses of his office and the expenses of the board, including the costs for printing.

Our present public health laws provide for the appointment of the commissioner of health, to be selected by the board, who shall be a physician skilled in sanitary science and experienced in public health administration, whose duty it is to enforce the rules and regulations of the board and submit an annual report with his recommendations to the state board of health. It also provides for the appointment of deputy health commissioners in each county of the state.

The board is also given jurisdiction and power to make adequate rules and regulations for the maintenance of the safe quality of water dispensed to and used by the public.

The law also provides for the appointment of nurses to render aid and assistance in tuberculosis cases, whose services shall be paid by the county or city as the case may be.

The board is also given charge of the system of registration of births and deaths which is administered through the supervision of the secretary of the board. His compensation for this service is fixed at twenty-four hundred dollars a year and he is furnished such clerical and other assistance as may be necessary in connection with the enforcement of this law. His office and headquarters are required to be maintained in the State Capitol at Jefferson City.

The licensing of chiropodists was placed under the supervision of the state board of health in 1919.

The licensing of physicians and surgeons and midwives was also placed under the jurisdiction of the board.

Before the passage of the Act of 1883 creating the state board of health there was no provision for revoking certificates or licenses to practice medicine and surgery in Missouri.

The Act of 1883 on this subject provides as follows:

"The State Board of Health may refuse certificates of individuals guilty of unprofessional or disorderly conduct, and they may revoke certificates for like causes after giving the accused an opportunity to be heard in his defense before the Board."

This provision, in identically the same language, was carried into the revision of the statutes of 1889 and 1899.

In 1901 this section was amended by adding thereto the following:

"Habitual drunkenness or excessive use of narcotics, or producing criminal abortion, shall be deemed unprofessional and dishonorable conduct within the meaning of this section, but this specification is not intended to exclude all other acts for which licenses may be revoked."

The legislature in 1907 further amended said section by adding thereto a proviso authorizing the right of appeal from the decree or judgment of the board revoking such license, to the circuit court of the county in which such board held its meeting and revoked such license, and required that a complete transcript and record of the proceedings had therein should be certified by the secretary of the board to the circuit court, which court was directed to hear and try the same as in ordinary civil actions, and provided that if the decree of the board was sustained that such license should stand revoked pending the appeal from the decree of the circuit court and until such time as the judgment of the circuit court should be reversed or set aside.

The legislature in 1909 again amended said section and authorized the board to receive and consider depositions and oral statements and required the board to cause stenographic reports of the oral testimony to be taken and transcribed, which, together with all other papers pertaining thereto must be preserved for two years. This section also authorized the accused, as well as the board, to secure testimony by depositions to be used on the trial of such charges before the board in the same manner, under the same rules and practice as is provided for the taking of depositions in civil cases.

In 1919 the legislature again amended said section by striking out the following words:

"But these specifications are not intended to exclude all other acts for which licenses may be revoked."

This left the definition of unprofessional or dishonorable conduct to read as follows:

"Habitual drunkenness, the drug habit, or excessive use of narcotics, or producing criminal abortion, or soliciting patronage by agents."

This is the definition as it stands today of unprofessional and dishonorable conduct.

The amendment of 1908 required applicants for certificates to practice medicine and surgery in Missouri to furnish satisfactory evidence of having received a diploma of some reputable medical college of four years' requirements at the time of graduation. No such requirement was contained in the law prior to this time

and subsequent to the creation of the state board of health. This requirement was carried in the statutes until 1921 when the legislature struck the word "reputable" from the act but restored it in 1923. The laws of 1921 provided that the question as to whether any medical school is entitled to recognition by the state board of health as a medical school of good standing or as "reputable," and the action of said board in refusing a license to any applicant, was declared to be a question of fact, and provides that any person aggrieved by reason of the action of the board, shall have the right to have such question reviewed by suing out a writ of certiorari in the circuit court, where such question shall be tried *de novo* by the court, and after reviewing the action of the board, is required to render judgment as should have been rendered in the first instance.

In 1921 the legislature struck out the word "reputable" in reference to medical colleges. An act prior to that time required that an applicant to the State Board of Health for permission to take the examination for license to practice medicine and surgery in Missouri must be a graduate of a reputable medical college of four years' requirement. Thus when the legislature struck out the word "reputable" it permitted any graduate of any medical school, regardless of its educational standing in the community to appear before the board and take the examination.

That is an illustration of the danger that the medical profession is facing today with reference to remedial legislation as to public health matters in this state.

Nobody knows better than the members of the board, and former members, the grief and difficulty they have had during that period of two years while that law was in effect, until the legislature of 1923 restored the word "reputable" to the medical practice act. Now no one can appear for examination before the board unless a graduate from a reputable medical school.

What constitutes a reputable medical school is left by the law to the judgment of the State Board of Health of Missouri, and to them alone. They cannot exercise it arbitrarily.

In that connection, one of the remedial laws we had introduced in the last legislature and sought to have passed was to require all medical schools in Missouri to be legally chartered before they could issue degrees, for this reason: If a medical school was not a reputable school and was turning out an inferior product, its charter could be revoked and it could not operate as a medical school. Whereas, as the law now stands, a medical college may operate as a common law trust, a partnership, or individual, and go right on. That is an important thing.

The State Board of Health of Missouri is your board and it alone is the body which administers the health laws of Missouri. If the sentiment of the medical profession is not strong enough to encourage and sustain that board, it may be lax in the performance of its duties.

The same thing is true with reference to the lawyers. The laws regulating the licensing of lawyers and their practice rests with the lawyers themselves. It is up to the legal profession to take care of their laws and their administration. Likewise is it up to the medical profession to take care of the administration of their laws through their board. If you are on your tiptoes and wide-awake and send men to the legislature friendly to organize medicine in Missouri, they will pass such laws as you want for administration by your State Board of Health.

I have seen three legislatures in session in the past four years. I know their sentiment with reference to the practice of medicine. I know there is a very marked and bitter feeling in the mind of the average legislator against what he terms the "medical trust" of Missouri, and the United States. I have been surprised to hear even country doctors talk about the "medical trust."

That is why we are not able to get these amendments to the medical practice act over in Missouri. Who is responsible for that sentiment that comes to the legislature? I think you have answered it already in your own minds. It has been the chiropractors and the followers of Mrs. Eddy. They have been active and the people have listened. When the representatives and senators come to the legislature, they come with their minds set against what they term the "medical trust."

What is the remedy? How will you preserve your remedial laws? How will you strengthen them? By electing to the legislature men friendly to the medical profession. If you do that, you will get such legislation as you need.

PERIODIC HEALTH EXAMINATIONS*

THE PLAN ENDORSED BY THE AMERICAN MEDICAL ASSOCIATION

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* CHICAGO, ILL.

May I just express the extreme pleasure and privilege I feel it is to meet with you this evening. Those of us whom you have delegated through your trustees to carry on the

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work at headquarters of the American Medical Association feel very keenly the need of frequent contact with the men in the field.

Unfortunately, there are not so many of us. There is a lot of work to be done, and it is not possible for us to get out as frequently as we would like. At these meetings, we get more from you, a good deal, than you do from us; because it is the purpose of the headquarters organization to reflect the ideas and wishes and meet the needs of the great body of the profession.

May I say one other thing? We are always glad to see you at headquarters. I think every member of the Association, whenever he is in Chicago or near it, should make it a point to visit the headquarters of the Association. You have a great plant there, a very efficient plant, doing an important work, and I am sure that you will all find it interesting, whenever you get an opportunity to visit it.

To come to my immediate topic, I will start with the trite old saying, "An ounce of prevention is worth a pound of cure." In no human interest or activity is this expression more true than of health and disease. Never in the history of the race was it so true as it is today. The amazing advance of medical science during the last half century has afforded practical results very largely in the field of prevention rather than of cure. In that period eighteen years have been added to the average expectancy of human beings by these advances.

The infant welfare crusade, which has cut infant mortality in this country on the whole just in two—much more than that in some places—has brought about this accomplishment through preventive rather than through curative measures. The antituberculosis crusade is essentially a preventive medicine crusade. The tuberculosis sanatorium is primarily a school to teach the incipient tuberculous individual how to take care of himself and to protect others. The great lessening in the incidence of mortality from some of the contagious diseases—typhoid fever, typhus fever, malarial fever, yellow fever—this latter disease now all but abolished—each is essentially due to preventive rather than curative measures.

In the various procedures of preventive medicine the newest and the most progressive is the custom, which is daily growing more prevalent, of periodic examinations of the apparently healthy. It is meant by this that the individual who presumes himself to be perfectly well, but feels he wants to be sure of it, presents himself to the physician at regular intervals, varying in time according to circumstances, to be looked over; just as he takes his watch to the watchmaker or his automobile to

the repair man to be overhauled and its defects repaired.

It is probable that in almost every generation there have been a few wise men who realized that prevention in this way was worth while. More than fifty years ago my good father, who was a practitioner in Wisconsin for many years, had a wise client, an ex-army officer, who used to pay him an annual remuneration for keeping his family well. How much this involved physical examination of the family I do not know; to some extent I know it was utilized. The doctor was requested to come to the home to inquire into the habits of living of the family, the sanitary conditions of the household and to advise them. Fortunately, he did not go quite so far as the Chinese and have it understood the doctor was to be beheaded if he did not keep them well!

Specifically, however, such examinations were advocated first a little over fifty years ago in England. In 1900 the late Dr. George M. Gould, an eminent ophthalmologist and medical writer in Philadelphia and editor of one or two medical journals, read a paper before the American Medical Association advocating in specific terms this matter of periodic health examinations; and the arguments which he advanced are just the same, practically, as we would advance today. He said among other things: "All good medicine tends inevitably to become preventive medicine. All good physicians labor to stop disease before it occurs. He is the greatest discoverer who finds the pre-symptom. The greatest therapist is he who cures before the disease exists—he who starves the bacillus and destroys their habitat, thus preventing the malfunction which becomes organic disease."

The dentists were before us in this matter and for a good many years it has been the custom of all good dentists to insist that their clients shall come at regular intervals and bring their children at least every three months to have their teeth examined so that the early defects may be repaired and they may be instructed in the care of the teeth.

Some fifteen or twenty years ago under the leadership of a great physician for children in Paris the pediatric world woke up to the fact that the solution of the terrific mortality among children was not in supplying sterilized milk or maintaining summer (tent) colonies for a few weeks of the year, but that it lay in the instruction of mothers as to how to care for their children. Now it is a general practice among physicians to have normal children brought to them at regular intervals to be examined and to instruct the mothers in their care.

In the last century some of the laws in Europe in reference to the employment of chil-

dren in the industries required that children should be examined before they were employed, to make sure they were physically fit. More recently the industrial establishments under workmen's compensation acts or the employers' liability acts are finding it very necessary to have employees examined before they enter upon service, and examined at intervals thereafter to make sure that they are developing no defects.

This is not for the purpose of limiting employment solely to the perfectly fit but to adjust the man to the job and make sure he does not undertake work for which he is not physically fit.

Eight or ten years ago some of the wiser insurance companies woke up to the fact it would be worth while to try the experiment of offering to their policyholders examinations at regular intervals, usually once a year or every two years; and in this connection arrangements were made with health extension organizations to make such examinations. On the basis of their experience these insurance companies are able, they think, to show that this has been a paying investment; that the increased life expectancy of these policyholders has saved more than enough money to pay the expense of these examinations.

The American Medical Association became interested in this matter three years ago. At a meeting of the Association in St. Louis in 1922 the House of Delegates passed a resolution presenting a plan of periodic examinations and directed the former Council, now the Bureau, of Health and Public Instruction, to prepare a suitable blank for that purpose. Dr. Haven Emerson, New York, was made chairman of the committee and with the cooperation of representatives from the state secretaries' organization a blank was prepared. It provides on one side of the sheet a space for the personal history of the individual which the person to be examined usually fills out. On the opposite side of the page there is space for the record of the physical findings of the insured.

This blank was presented at the meeting in San Francisco in 1923 and approved by the House of Delegates, and further action taken urging every county medical society to make this matter a subject for discussion at at least one meeting during the year, and that the county societies take steps to educate their members in the proper conduct of such examination, and to educate the public. How to do that was not clearly defined. It was further resolved that only the indigent should be examined free of charge, indicating the very proper opinion that this service is something which must be paid for and adequately paid for.

In 1924, the blank having been in use about a year, on the basis of a few criticisms, I appointed a special committee of carefully selected men to revise the blank. It was found necessary to make but few changes.

At the meeting last June in Chicago, the House of Delegates directed that a suitable manual of suggestions should be prepared for the aid of physicians giving such examinations. That has been in preparation for some months and I have with me the copy pretty nearly ready to go to the printer. I hope we shall have it ready to place in the hands of physicians who desire it in the near future. I am sure the original report of Dr. Emerson has served a useful purpose. Nearly 100,000 copies of the blank have been sold to members and 15,000 copies of the original report.

Now as to what some of the states have been doing. Not all of the county medical societies followed the injunction of the House of Delegates. Meetings have been held in a relatively small number of the counties. Some of the state associations, however, have taken definite action and important action looking to the furtherance of this movement. The Maine State Medical Society I think has adopted a very wise plan, not only for the promotion of this health movement, but for others. There has been organized the Maine State Health Association, made up largely of representatives of the Women's Federation, of the employers' organization, of the federation of labor, of the tuberculosis organization and others. So that this is a lay movement. This Association has undertaken the education of the public as to the importance of this movement.

In Illinois a society was organized, also largely made up of lay people, for the special purpose of promoting this movement. It has not as yet been very active.

In Pennsylvania, the State Medical Association, at its meeting a year ago, staged an interesting demonstration similar to one which had been held in Brooklyn. They offered an examination to all of the members who desired it, by persons fully competent to give this examination. The Kings County experience is most illuminating. Ninety-one members of the Kings County Society submitted themselves to this examination. These were doctors presuming themselves to be in perfect health. Not a single one was found to be free from defects. Only four were found in Class 2 with minor defects. The great majority had more or less serious defects demanding medical attention or hygienic measures.

This was a striking revelation to these doctors, for it was obvious that if they were so far removed from health their clients were pretty certain to be similarly situated.

The Texas State Medical Society staged an important campaign last year in the newspapers and spent \$25,000 for newspaper space to give publicity to health measures, and particularly to this one.

The New York County Medical Society has taken similar action, and there are others.

The Bureau of Health and Public Instruction of the American Medical Association in addition to preparing this blank and this new manual, undertook to wake up the medical schools and the hospitals to the possibility of their usefulness in this field. Letters were addressed to some sixty medical schools calling their attention to the growing importance of preventive medicine and particularly of this movement and asking them to arrange courses to prepare their students for this service—for it does require special instruction.

One of the most disappointing things in connection with this movement—I speak of it with very much regret because I have been interested in that field for many years—is the small amount of attention being given in medical schools to the preventive side of medicine. I believe the medical profession as a whole ought to give attention to this matter as they did to the low state of medical education over twenty years ago. You know what marvelous results have come from the work of the Council on Medical Education and Hospitals. Medical education has been revolutionized from a condition which was more or less a disgrace to the profession and a menace to the country. We have now medical schools which rank with any in the world.

I feel that now is the time for the profession to demand of the medical faculties that they instruct their students who are going into practice for the future to give a large amount of attention to preventive medicine in order to render the fullest possible service which the state of medical science and art makes possible.

There is a splendid opportunity for hospitals to be of service to neighboring organizations. It would be an easy matter for the staff of any hospital to arrange courses in periodic examinations. Of course most physicians are qualified to do this work, but they need suggestions and must have help in certain directions. Hospitals are slow in waking up to this matter.

What are the necessary steps to promote this movement and make it as successful as possible? First, the education of the physicians as to its importance and in methods of conduct; second, the education of the public. The latter movement is proceeding more rapidly and satisfactorily than the former. In the matter of the education of the profession, the first question that arises is: Who is to make these examinations? Do we require a group

of special men who devote themselves exclusively to it? There have been some men who have already set themselves up as specialists in periodic examinations—to my mind, and I think in the opinion of most medical men, a very foolish and futile idea. We do not need men who do nothing else. Nobody is so well qualified to do it as the practitioner who is at the same time engaged in curative medicine.

Do we need groups representing the several specialties, so that one man looks at the eye, another at the ear, etc.? No. To proceed along any such line would be to defeat the very purpose of the movement, for two reasons at least: First, it is too expensive in time and money. If this movement is to reach the people who need it, it must reach the people of moderate means; second, it is obvious that in a great many of the smaller communities such groups do not and will not exist. No. The family doctor, the general practitioner, is the one individual to make examinations of this type. All he needs is a little assistance, a little training for this particular phase of the work, and I shall point out presently in what particular direction.

The steps in the making of a periodic examination consist, first, of a careful history of the individual, which is provided for on the blank and usually written by himself. This asks the usual things but in more detail—a good deal more—than is contained on the ordinary clinical sheet. If one is to deal with the individual intelligently, he must know his home conditions; his habits of eating, working, sleeping; whether there is anything in his financial or family circumstances that is a source of annoyance to him. Has he been subject to disease?

Second, it consists of a complete physical examination from top to toe. This need not be a long time-consuming affair if the physician becomes reasonably expert, nor is it necessary to use ultra-refined means of diagnosis except in special cases; for mark you, we are dealing with the presumably healthy individual. If he comes complaining of illness or distressing symptoms, he is not a health client. He is a patient in the ordinary sense of the word.

The examination does need to be more thorough than is usually given, and one of the great advantages of this system of procedure is that it is going to make the average doctor more thorough, more careful, more efficient in his clinical work than he is at the present time.

When the examination is completed, the examiner must review his findings and summarize what he has found. He looks for what? Incipient disease. Many cases of incipient tuberculosis will be detected by this procedure

that now escape notice until they are pretty well advanced. There are other diseases which will be detected in their incipency, when they may be easily corrected, as well as physical defects of vision, of hearing, of teeth, of tonsils, defects of posture, malnutrition, and the like.

But a word of caution is necessary lest we attach too much importance to this matter. Whether a man is normal or approaches normal depends entirely on the standard which is set up. We were all greatly amazed and disturbed because in the examination of men for the selective service during the war, nearly 40 per cent. of the young men of this country were found unfit for military services. Does that mean they were physical wrecks, unfit for the ordinary duties of life? Not at all. It means they did not measure up to the standards for military service.

Dr. Lee, of Harvard, in examining a large number of medical students there, discovered that not over 5 per cent. of the students had defects of any real serious importance. Between that and the very large percentage found in some other groups there is probably the average minimum. But I should like to emphasize the fact that it is easy to attach undue importance to these minor defects.

Focal infections are another thing which we seek in making such examinations. One of the important discoveries of the last twenty years, due largely to Dr. Billings and his group of co-workers, is the fact that inflammations of the joints, kidney disease, heart disease and others are due primarily to a focus of infection, sometimes in the teeth, sometimes in the tonsils or the appendix. No doubt there is much truth in that finding but it is very easy to exaggerate it. To make sure a focal infection is responsible for a particular general condition one must first make sure that the focal infection is there and then that there is not some other cause for that particular condition.

The education of the public is proceeding on the whole very satisfactorily. The public is much more alive to this matter than most of the profession realize. They are reading about it in the magazines, and one of the things which discourages them very much is the fact that when they go to many physicians they are met with the off-hand rejoinder there is nothing the matter with them; or they are given a cursory examination. When an individual comes to a physician for a real examination he ought to get it and pay for it; and he is willing to pay for it, as a rule.

One of the questions asked us is why we have not provided for a carbon copy of the original report. There are two reasons: In the first place, where the examinee makes out his own report, it is difficult for him to make a car-

bon copy. Moreover, he does not want a carbon copy. What he wants is a statement of what the doctor has found and what he advises. After the doctor has summarized his findings, the main thing is to give the client what he comes for: Advice. Are his habits right? Is there some physical defect which needs correction? If so, what; and what is the further procedure?

That should be stated in writing, as a rule. In the matter of directing him as to diet and posture and exercise and the like, use may be made of printed slips. There is always the danger in using slips of that sort that the practice may become routine, not individual.

The education of the public is being accomplished through newspapers and by the American Medical Association, largely through "Hygeia"—and I want to say here I think Hygeia is proceeding satisfactorily; but it needs and ought to have the support of every member of the medical association to whom it belongs. It seems to me the least that any physician can do is to have it on his reception room table, to see that it is in the school and public library of his town, and to get at least one subscriber from among his clients. If every one of the more than 90,000 doctors in the Association would do this, we would not have to worry about its circulation.

The importance of physical education may be emphasized through the public press, the radio, and through the schools. One of the most effective means is through the examination of children in the schools, which is, happily, being provided for in a great many schools, in spite of the opposition of the Eddyites.

Finally, the best means of all is the family doctor himself. It is just as much his privilege and duty to educate the people of his clientele as to the importance of periodical health examinations as for the dentist to ask his patients to come to his office and have his teeth looked over, or for the pediatric practitioner to insist that mothers bring normal babies for inspection and instruction.

How he may proceed in this is something that must be considered with care. One of the questions that has come to the Bureau is, "Ought I to circularize my patients?"

We think not. In the first place, it is rather difficult for the doctor to be very sure that John Smith, who called him to see one of his children last year, is *his* patient; and he will be pretty sure to be treading on some other doctor's toes if he sends circulars promiscuously around the country to patients whom he thinks are his. When the patients are in his office or he in their family, he has a perfect right, and it is properly his privilege and duty to say to those patients: "You ought to be examined at

intervals." In that manner the education will proceed satisfactorily.

I have tried to give you a hurried survey—I realize how inadequate it is—of the present status and the prospects of this very important national health movement. We of the headquarters, and especially the Bureau of which I have charge, are there to be of every possible assistance to you. We welcome suggestions and criticism of any sort, provided they are reasonable and in good spirit, and shall be most happy to cooperate in any way possible to help you in making this a great national health movement a speedy and noteworthy success.

535 North Dearborn St.

PERIODIC HEALTH EXAMINATIONS

CO-OPERATION BY STATE AND COUNTY MEDICAL SOCIETIES

FRANK I. RIDGE, M.D.

KANSAS CITY, MO.

Dr. Dodson has really covered the subject so thoroughly that there is not much left for me to say. He opened his remarks with that trite old saying: "An ounce of prevention is worth a pound of cure." We all agree with him in that, but we must qualify our definition. We cannot assume the attitude of the ostrich and stick our heads beneath the sand and because we see nothing agree that everything is normal. The same thing holds true in the examination of apparently sound human beings for the determination of any illness they may have.

Dr. Dodson also mentioned the psychology of the home life of the patient, which the family physician alone knows. There is a statement by a well known mail-order house that thirty per cent. of its goods are returned as spoiled. In other words, they allow for their profit and loss thirty per cent. deterioration in the goods they deliver. Unfortunately, dealing with human beings, human mentality, and things like that, thirty per cent. is a great loss; therefore, instead of a machine-made proposition to deliver advice upon your well-being, it necessitates, first, an intimate knowledge of the person who is going to be examined; second, a discussion as to his environment; third, an understanding which cannot be put down in writing and understood by any coterie of clerks sitting behind a desk.

How shall the members of the county societies proceed if they wish to enter into periodical health examinations of the public?

It means we have to come in contact with our patients. How are we going to do it? There has never been any great movement for the benefit of mankind started by proselyting; by

going out into the streets and taking in unwilling victims, throwing them on a table and looking them over as to heart disease or nephritis or defective teeth. It starts individually with an educational program that is brought forward, not by blazoned advertising, but by individual suggestions; and it lies within the county and state societies to plant this seed of suggestion in the minds of the lay public and also the medical public.

This is coming. It must come. It is health insurance. The development of physically fit men and women to carry on the activities of the world is a greater factor in the salvation of our country today than standing armies. But you cannot force them to become physically fit. You cannot go to your city administration and say, "Do this or that." You must make them want it; make them see the value of it.

You cannot come in as individuals. You cannot come in as groups. You must come in as a whole, and in fact right this present day comes the greatest opening, the greatest value of what we have organized in this country during the last year or so, our Women's Auxiliary.

The greatest value we have today in preventive medicine is suggestion. A patient comes in to your office. You give him a careful examination. Don't slight him. Look at him carefully. If there is nothing wrong, tell him so, but you do not see many that way. If he has some minor defect call his attention to it. In that respect it is like a man driving an automobile. He oils his car and fixes his tires. That is what periodical health examination means, and the only way we, as members of our county societies can co-operate, can promote this, is by education through suggestion, not through pamphlets, because there are very few who read pamphlets.

The matter of fees comes up. It needs the co-operation of the county and state societies more than any other factor in the development of this propaganda. The extent of the examination is never known when the examination is made. It should be understood, and the societies should have an understanding among themselves and make it known to the public that these are going to be reasonable fees; that the medical profession is doing this as it has always done, in an altruistic frame of mind; that we are paying no commissions for the proselyting of victims or for propaganda; that we have no overhead except our normal overhead; that we are merely trying to develop as nearly as possible 100 per cent. efficient, functioning men and women for this, our commonwealth.

1002 Medical Arts Building.

COMMON WARTS OF THE MOUTH

REPORT OF TWO CASES

WILLIAM D. DAVIS, M.D.

ST. LOUIS

Common warts of the mouth, verrucae vulgares, do not occur as commonly as do warts on other parts of the body. Cases have been reported by Heidingsfeld,¹ Pusey,² Sir Henry Bultin³ and others; while Hartzell,⁴ Knowles,⁵ Stelwagon,⁶ Blair,⁷ and the George Blumer edition of Forcheimer's *Therapeusis of Internal Diseases*⁸ states that warts occur on the mucous membrane of the tongue and lips, the Forcheimer's *Therapeusis* stating that they occur most frequently on the hands, but are more rarely met with on the lips and inside the mouth and nose.

In Heidingsfeld's case there were warts (*condyloma acuminata linguae*) on the tongue with corresponding lesions on the labia majora; while in Pusey's case there was a verruca vulgaris on the tip of a man's tongue that had existed for six years. Butler reports two cases, the first, a very unusual case at St. Bartholomew's Hospital, occurring in a boy who had a warty enlargement of all the fungiform papillae of his tongue. The other case, at the Hospital for Sick Children, occurred in an infant 10 months old who had a wart on the under aspect of the tongue, to the left of the frenum, in the groove between the tongue and the floor of the mouth. Butlin further states that "warts occurring on the tongue are most frequent on the dorsum, within the papillary area, and are then doubtless due to hypertrophy of the natural papillae; but they are not limited to the papillary area and may grow on the under aspect where the mucous membrane is quite smooth. They may occur at any age and are not uncommonly congenital. Warts developing on a chronic leucoplakia or chronic superficial glossitis almost invariably becomes cancerous. Warts within the mouth resemble warts on other parts of the body; but on the lip they may develop true horn."

Blair states that "warts are not uncommon in the mouth, occurring upon the dorsum of the tongue, although they may grow on the under surface of the tongue, on the lips, or on the inner surface of the cheeks. They are usually single, but may be multiple. Warts are local epithelial proliferations that grow toward the surface and remain superficial to the basal membrane, which distinguishes them from malignant epithelioma in which the multiplying cells break through the basement membrane and invade the deeper tissues."

The common wart (*verruca vulgaris*) is the type most frequently seen in the mouth, and the two cases reported in this paper were of that variety.

Much work has been done by various men in trying to isolate a definite, causative agent for warts; but as yet this has not been accomplished, although most men believe that warts are contagious and are due to a specific causative agent.

Wile and Kingery⁹ proved that warts can be developed from the filtered material; while Kingery¹⁰ went further and was able to produce warts in the second generation, the in-



Fig. 1. Case 2. Verrucae on the mucous membrane of the lips. (From the Dermatological Department of St. Louis University.)

used for the experiments. Kuhnemann¹³ discovered a bacillus with which he was able to produce suggestive lesions experimentally in rabbits. Blosser¹⁴ states that the cause of warts is unknown, but that they are inoculable cubation period being about six months which was longer than those produced in the first generation. In conclusion Kingery states: "It would rather seem from the clinical and experimental evidences of contagion and experiments described herein, that in the production of ordinary warts there must be an infectious agent that is specific, that does not thrive on ordinary cultural medium, and that is at the same time capable of passing through the finest filtering apparatus obtainable."

Morrow, Allen and Bronson¹¹ noted the spread of warts by contiguity, spreading from one member of a family to another. Jadaschon¹² was able to reproduce warts by inoculation; thirty-one inoculations were successful out of seventy-four, six individuals being either to another part of the body or to another person. Lipschütz¹⁵ describes his cyto-

logic findings in beginning warts. He believes that the inclusions in the nuclei of certain cells are due to chlamydozoa. Bonjour¹⁶ believes that warts are due to psychic causes. He states that he cured them by suggestion within one to five weeks.

The observations and findings of most of these men would most certainly seem to favor a definite, specific causative agent for warts, and undoubtedly in time this will be isolated.

The pathology of common warts reveals a hyperkeratosis, acanthosis of the rete, with downward extension and some branching of the rete pegs and an increased vascularity of the interpapillary bodies.

The treatment of common warts of the mouth is the same as that for common warts elsewhere, with some exceptions owing to the location. There are many methods of treatment, both internal and local, and one has to choose the method that is best suited to the individual case, considering the location and characteristics of the wart or warts. Galvano-cautery, fulguration, electrolysis, excision, ligation, and various escharotics; the internal and intravenous use of various drugs, such as mercury, arsenic, etc., X-ray, radium, the Kromayer lamp and other lights, have been used successfully in the treatment of warts. Where warts are extensive in the mouth one should choose a means by which there will not be too much denuding of the mucous membrane; in the second of these cases trichloroacetic acid was used locally. Linday¹⁷ reports a case of verrucae of the scalp treated successfully by the intravenous use of neoarsphenamin. Blendermann¹⁸ in treating warts disinfects them first with tincture of iodine, freezes them with ethyl chlorid, and removes them with a sharp curette. The method is considered painless; the scar is insignificant.

Of the two cases presented, one was a single verruca of the tongue; the other had an enormous number of verrucae in the mouth.

Case 1. G. B., a white male, aged 45, married, was first seen in July, 1923. He gave a negative family history and his past history elicited nothing of consequence. He has been an habitual pipe-smoker nearly all his life. The physical examination revealed nothing of importance except that he has a very bad pyorrhea with several decayed teeth.

The present condition started as a small rough spot on the tip of his tongue four years ago, gradually increasing to the size of a large pea. The lesion is rather firmly imbedded in the tongue, is of a dirty slate color and is distinctly verrucous in character. The patient stated that he constantly rubbed his tongue against his teeth and was afraid that a cancer would develop.

The lesion was excised and the base destroyed by galvano-cautery. The pathological examination showed the specimen to be that of a typical verruca vulgaris, with hypertrophy of the horny layer, acanthosis, and an elongation of the papillae.

Case 2. A colored female, aged 10, well nourished, clean, and of a fairly intelligent negro family, gives

a negative family history except that two brothers died of influenza during the epidemic following the war.

The child is the youngest of ten children and gives a past history of having the usual childhood diseases: influenza four years ago; the thrush (mycotic stomatitis) three years ago, with history of having made a good recovery. She had intermittent attacks of acute tonsillitis.

The general physical examination revealed nothing of importance except that she has enlarged tonsils. The Wassermann reaction was negative. The patient complains of pain on mastication, particularly of acid foods, and states that the present trouble started two years ago (while the family were living in Arkansas), first as a small "rough spot" on the mucous surface of the lower lip, and within a period of two weeks many other similar lesions made their appearance in the mouth. They gradually increased in number until the time that she first came to the clinic. Examination revealed very many grayish-white, raised verrucous-like lesions, ranging in size from that of a pinhead to a large pea, and located on the vermillion and mucous surfaces of both lips, the inner and outer surfaces of both upper and lower gums, inside of both cheeks, the dorsum of the tongue, and the hard and soft palate. There were over one hundred lesions in this patient's mouth; they were rather firm to the touch and, owing to the color and multiplicity of the lesions, lymphangiomata were suspected but the lesions, as stated, were distinctly verrucous-like and did not yield any fluid on puncturing.

The pathological examination confirmed the diagnosis of simple verrucae, as there was hypertrophy of the horny layer with acanthosis of the rete and an elongation of the papillae with increased vascularity of the interpapillary bodies.

It seems to the writer that the mouth in this case offered a suitable means for the spread of the warts by continuity, first starting as the "mother wart" on the mucous surface of the lower lip and spreading until the whole mouth was involved.

Owing to the great number of warts present, the question of treatment arose and the various local measures were considered, e. g., galvano-cautery, electrolysis, and the use of some excharotic. It was decided to use trichloroacetic acid. The lesions were first wiped dry with cotton and the acid applied to each individual wart. This was repeated twice weekly, and at the end of eight weeks all lesions had entirely disappeared.

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CAUSES OF BLINDNESS IN YOUTH

AS DETERMINED AT THE MISSOURI SCHOOL FOR THE BLIND

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There are very few statistics of the causes of blindness; particularly is this true in the case of the young. Dr. H. Frese¹ published a report of the causes of blindness in 849 youthful blind persons, students in the Federal Institute for the Blind at Steglitz.

At the Missouri School for the Blind at St. Louis 507 pupils have taken instruction since 1905. Opportunity thus was offered of determining the ocular condition of a fairly large number of blind children from 5 to 25 years of age. In this number there are included 26 pupils who entered the school at ages greater than 25 years. Of this 26 there are but 9 who became blind when over 25 years of age; none

of the 9 lost their sight when older than 31 years.

There are quite a few cases where there is a different cause for blindness in each of the eyes in the same individual. That makes it necessary, if fractions are to be avoided, to tabulate numbers in tables 1 and 3 in terms of eyes, rather than as so many individuals.

TABLE 1. CAUSES OF BLINDNESS

	Number of Eyes			Per cent.
	Boys	Girls	Total	
Ophthalmia neonatorum	80	136	216	21.2
Optic atrophy	94	60	154	15.1
Congenital cataract	54	33	87	8.6
Corneal ulceration	39	29	68	6.7
Uveitis	42	26	68	6.7
Trauma, simple	57	9	66	6.5
Trauma and sympathetic ophthalmia	38	18	56	5.5
Trachoma	25	38	63	6.2
Hydrophthalmus	40	16	56	5.5
Microphthalmus	16	15	31	3.1
Retinal degeneration	18	12	30	3.0
Chorioretinitis	9	13	22	2.2
Prenatal corneal opacity	7	9	16	1.6
Parenchymatous keratitis	6	8	14	1.4
Retinitis pigmentosa	12	2	14	1.4
Postocular amblyopia	2	6	8	.8
Keratoconus	4	2	6	.6
Anophthalmus	6	0	6	.6
Retinal detachment	5	0	5	.5
Prenatal uveitis	2	2	4	.4
Prenatal dislocation of lenses	2	2	4	.4
Myopia		4	4	.4
Aniridia		2	2	.2
Coloboma of iris		2	2	.2
Neuroretinitis	2		2	.2
Essential phthisis of conjunctiva	2		2	.2
Phlyctenular keratitis		2	2	.2
Cataract	2		2	.2
Unknown (cataract obscured fundus)	4		4	.4
Eyes	568	446	1014	100.0
Pupils	284	223	507	
	56.0%	44.0%		

TABLE 2.—NUMBER OF NEW PUPILS FOR EACH SCHOOL YEAR FOR EACH CAUSE OF BLINDNESS

	1905-1906	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13	'13-'14	'14-'15	'15-'16	'16-'17	'17-'18	'18-'19	'19-'20	'20-'21	'21-'22	'22-'23	'23-'24	'24-'25
Total new pupils each year	23	16	30	20	20	20	21	35	11	29	24	27	25	17	16	20	35	36	23	20
Total new pupils, 5 years			109					116					109					134		
Ophthalmia neonatorum	6	5	6	4	3	4	4	8	3	6	5	6	5	4	2	2	4	6	3	2
Percent ophthalmia neonatorum	26%	31%	20%	20%	15%	20%	19%	23%	27%	21%	21%	22%	20%	24%	13%	10%	11%	17%	13%	10%
No. and percent ophth. neon., 5 years		24	-	22%			25	-	22%		22		20%				17	-	13%	
Optic atrophy	1	2	6	5	4	6	2	4	3	2	1	5	4	5	3	1	6	6	2	4
Percent optic atrophy	4%	13%	20%	25%	20%	30%	10%	11%	27%	7%	4%	18%	16%	29%	18%	5%	17%	17%	9%	20%
No. and percent optic atrophy, 5 years		18	-	17%		17	-	16%			18		17%				19	-	17%	
Congenital cataract	1	3		2		2	2	4	1	4	4	2	2	1	2	2	4	1	4	1
Percent congenital cataract	4%	18%		10%		10%	10%	11%	9%	14%	17%	7%	8%	6%	13%	10%	11%	3%	17%	5%
No. and percent congenital cataract, 5 years		6	-	6%		13	-	11%			11		10%				12	-	9%	
Corneal ulceration	1		3	3	1	1		2	2	1	1	2	2	1	1	1	1			
Percent corneal ulceration	4%		10%	15%	5%	5%		6%	2%	4%	4%	7%	4%	10%	6%	5%	3%			5%
No. and percent corneal ulceration, 5 years		8	-	7%		6	-	5%			5		5%				3	-		
Uveitis	1	2	1	1	1	1	2	1	1	1			2	1	1	1	2	4	4	2
Percent uveitis		6%	7%	5%	5%	5%	10%	3%	9%	4%			8%	6%	6%	5%	6%	11%	17%	10%
No. and percent uveitis, 5 years		5	-	5%		6	-	5%					4	-	4%		13	-	10%	
Traumata	2			1	4	4	3	1	1	5	4	2	4	2	2	4	4	4	5	1
Percent traumata	9%			5%	20%	20%	14%	9%	9%	17%	17%	7%	9%	12%		20%	11%	11%	22%	5%
No. and percent traumata, 5 years		7	-	6%		14	-	12%			9		8%				18	-	13%	
Trachoma		5	2		2	2	3	3		1	1	1	1	1	1	1	3	3		
Percent trachoma		31%	7%		10%	10%	14%	9%		4%	4%	4%	4%	6%	6%		9%	8%		
No. and percent trachoma, 5 years		9	-	8%		9	-	8%			5		5%				6	-	5%	
Hydrophthalmus	1	2	2					2		2	2	2	2			3	2		1	2
Microphthalmus				1	1		1		1	2	1	1	1			3	1			
Retinal degeneration	1					1	1		1					3				5	1	1
Chorioretinitis	1				1							2	2							
Prenatal corneal opacity								1		1				1	1			1	1	1
Parenchymatous keratitis			1					1			1					2	1	1		
Retinitis pigmentosa			1					2				3					1		1	
Postocular amblyopia								1							1			1	1	
Keratoconus								1												
Anophthalmus					1												1			1
Retinal detachment															1					
Prenatal uveitis										1								1	1	
Prenatal dislocation lenses																				
Myopia					1								1							

1. Klinische Wochenschrift, Berlin, December 23, 1924.

TABLE 3. CAUSES OF ACCIDENTS OR TRAUMATA

	NUMBER OF EYES			Totals
	Simple Trauma	Trauma and Sympath. Ophthal.	of Industr. cause	
Gunshot	19			19
Knife		14		14
Dynamite	12		12	12
Dynamite cap	10			10
Scissors		6		6
Powder	5			5
Lime	4			4
Nail		4		4
Fireworks	4			4
Steel		4	2	4
Rock	1	2		3
Coal		2		2
Glass		2		2
Fork		2		2
Penpoint		2		2
Lead pencil		2		2
Explosion boiling water in can	2			2
Spout on oil can.....		2		2
Button on string.....		2		2
Thorn		2		2
Rusty tin		2		2
Wire from spring-gun...		2		2
Blade of corn		2		2
Striking against chair...		2		2
Corn stalk		2		2
Limb of tree.....	2			2
Kindling	1			1
Sheep shears	1			1
Fall on box.....	1			1
Twig of tree.....	1			1
Chair rocker	1			1
Toy cannon	1			1
Collision on athletic field	1			1
Eyes	66	56	14	122
Pupils	33	28	7	61
Per cent.	54.1%	45.9%	11.5%	100.0%

In four cases, one eye had been lost from an entirely different injury from that which had blinded the fellow eye.

The apparent discrepancy, appearing in the number under each cause of blindness, that occurs in the next 4 tables as compared with table 1, is caused through those cases (11 in all) in which one eye is blinded from a different cause than the fellow eye. Such cases have been listed in table 2 and the remaining tables,

as belonging to that cause of blindness accountable for the loss of sight in the eye with better vision at the last examination.

In the next table the number before the dash is the number of pupils with the cause of blindness at the left, who lost their sight at the age-period above; the number after the dash is the number of pupils with the cause of blindness at the left, who entered the school at the age-period above. The numbers on the two sides of the dash may refer to entirely different individuals.

In the next table, the number of people in Missouri living in and the number of blind scholars coming from communities of four different sizes are noted. The first division, cities over 100,000, would include only St. Louis and Kansas City, where there are many physicians doing eye work exclusively; the second division, cities with a population between 100,000 and 5,000, have physicians specializing in eye, ear, nose and throat work; the third division, towns having 5,000 to 100 individuals, have no specialists but have general physicians, and the last section, localities of 100 and less inhabitants, are served in most instances by no physicians whatever. It must be remembered that conditions in these localities as regards specialists are in many instances now quite different from what they were twenty or thirty years ago when many of the cases listed in our tables lost their sight.

Tables 8 and 9 are simply the writer's estimates from the previous tables of the amount of blindness due to venereal diseases and the amount of preventable blindness. Needless to say such estimates are subject to much difference of opinion.

TABLE 4. AMOUNTS OF VISION

	Totals	NUMBER OF PUPILS WITH VISION					Per cent. with vision 0 & L. P.
		OF—	Light Percpt.	L. P.— 5-200	5-200— 20-200	20-200— 20-80	
Ophthalmia neonatorum	108	32	29	20	16	11	56.5
Optic atrophy	77	29	13	21	10	4	54.6
Congenital cataract	44	1	2	11	14	16	8.7
Corneal Ulceration	35	8	16	4	3	4	68.6
Uveitis	32	19	6	4	2	1	78.1
Trauma, simple	33	16	5	10	1	1	63.6
Trauma with sympathetic ophthalmia.....	28	10	11	5	1	1	75.0
Trachoma	32	6	4	7	8	7	31.3
Hydrophthalmus	28	7	7	10	4	0	50.0
Microphthalmus	14	7	2	1	3	1	64.3
Retinal degeneration	15	4	2	5	1	3	40.0
Chorioretinitis	12	2	1	2	4	3	25.0
Prenatal corneal opacity	8	2	1	3	1	1	27.5
Parenchymatous keratitis	7			2	2	3	0.0
Retinitis pigmentosa	7		2	2	3		28.6
Postocular amblyopia	4		2			2	50.0
Keratoconus	3			1	2		
Anophthalmus	3	3					
Retinal detachment	3	1	1	1			
Prenatal dislocation of lenses.....	2			1	1		
Prenatal uveitis	2	1			1		
Myopia	2	1				1	
Aniridia	1					1	
Coloboma of iris	1						
Neuroretinitis	1				1		
Essential phthisis of conjunctiva.....	1				1		
Phlyctenular keratitis	1				1		
Cataract	1			1			
Unknown (Cataract obscured fundus).....	2		2				
Total Pupils.....	507	149	106	111	80	61	
Per cent	100.0%	29.4%	20.9%	21.9%	15.8%	12.0%	

TABLE 5. AGES AT WHICH PUPILS LOST VISION—AGES AT WHICH PUPILS ENTERED SCHOOL

	Number of pupils losing vision and entering school at respective ages below								
	Totals	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
<i>Prenatal Conditions (Present before birth)</i>									
Optic atrophy	-23		-11	-8		-3			-1
Congenital cataract	-44		-17	-16	-9	-1			-1
Microphthalmus	-14		-6	-5	-3				
Prenatal corneal opacity	-8		-3	-3	-1			-1	
Postocular amblyopia	-2		-1		-1				
Anophthalmus	-3		-2	-1					
Prenatal uveitis	-2			-1	-1				
Prenatal dislocation of lenses	-2		-1	-1					
Aniridia	-1		-1						
Coloboma of iris	-1		-1						
Subtotals—19.5%	-100		-43	-35	-15	-4		-1	-2
<i>Hereditary Conditions (Occuring after birth)</i>									
Optic atrophy	24-24	2-	10-3	6-8	5-8	1-4		-1	
Hydrophthalmus	28-28	23-	3-4	1-16	1-7		-1		
Retinal degeneration	15-15	11-	3-6	-3	1-4	-1	-1		
Chorioretinitis	12-12	6-	1-2	2-6	2-1	1-3			
Parenchymatous keratitis	7-7	3-	3-1	1-5	-1				
Retinitis pigmentosa	7-7	3-	4-2	-1	-3	-1			
Postocular amblyopia	1-1		1-1						
Keratoconus	3-3	2-		1-2					-1
Myopia	2-2	1-		-1				1-1	
Cataract	1-1			1-1					
Unknown (cataract obscured fundus)	2-2			2-1	-1				
Subtotals—20.1%	102-102	51-	25-19	14-44	9-25	2-9	-2	1-3	
<i>Acquired Conditions</i>									
Ophthalmia neonatorum	108-108	108-	-60	-30	-11	-6	-1		
Optic atrophy	30-30	5-	12-4	4-9	3-8	1-3	4-4	1-2	
Corneal ulceration	35-35	15-	10-7	7-16	1-6	1-5	1-1		
Uveitis	32-32	14-	8-9	5-12	2-5	2-3	1-2	-1	
Trauma, simple	33-33		12-7	5-3	12-10	3-8	1-2	-1	-2
Trauma and sympathetic ophthalmia	28-28	11-	5-8	7-8	4-9	1-2			-1
Trachoma	32-32	7-	14-5	6-10	5-11	-4	-2		
Retinal detachment	3-3			2-1	-1	1-1			
Neuroretinitis	1-1			1-	-1				
Essential phthisis of conjunctiva	1-1	1-		-1					
Phlyctenular keratitis	1-1	1-	-1						
Postocular amblyopia	1-1	1-							
Subtotals—60.4%	305-305	163-	61-101	37-91	27-62	9-32	7-12	1-4	-3
Totals	507	214-	86-163	51-170	36-102	11-45	7-14	2-8	-5

TABLE 6. WASSERMANN TESTS ON BLOOD—CASES WITH PARENTS RELATED—CASES WITH BLIND RELATIVES

	Totals	Wassermann Blood Pos.	Test Neg.	Totals having Test	No. with Parents Related	No. having blind Relatives
<i>Prenatal Conditions</i>						
Optic atrophy	23	1	12	13		
Congenital cataract	44		17, 24	25		15
Microphthalmus	14		13	13	3	1
Prenatal corneal opacity	8		7	7		
Postocular amblyopia	2		1	1		
Anophthalmus	3		1	1		
Prenatal uveitis	2		2	2	1	
Prenatal dislocation of lenses	2		1	1		
Aniridia	1		1	1		1
Coloboma of iris	1		1	1		1
Subtotal	100		1	1		
<i>Hereditary Conditions</i>						
Optic atrophy	24	2(2+), 6	5	13		
Hydrophthalmus	28		17, 14	15		2
Retinal degeneration	15		9	9		3
Chorioretinitis	12	3	2	5	2	
Parenchymatous keratitis	7	5	2	7		
Retinitis pigmentosa	7		3	3	1	2
Postocular amblyopia	1		1	1		
Keratoconus	3		1	1		
Myopia	2		1	1		1
Cataract	1		1	1		
Unknown (cataract obscured fundus)	2		2	2		
Subtotal	102					
<i>Acquired Conditions</i>						
Ophthalmia neonatorum	108		52	52		
Optic atrophy	30	2	6	8		
Corneal ulceration	35		10	10		1
Uveitis	32	2	21	23	2	
Trauma, simple	33		13	13		1
Trauma and sympathetic ophthalmia	28		13	13		
Trachoma	32		11	11		5
Retinal detachment	3					
Neuroretinitis	1					
Essential phthisis of conjunctiva	1		1	1		
Phlyctenular keratitis	1		1	1		
Postocular amblyopia	1		1	1		
Subtotal	305					
Totals	507	2(2+) -19	27-233	256	9	33

TABLE 7. NUMBER OF PUPILS FROM COMMUNITIES OF DIFFERENT SIZES FOR EACH CAUSE OF BLINDNESS

	Cities over 100,000	Cities 100 000 to 5000	Towns 5000 to 100	100 and less	Totals
Total populat. each community (1920).....	1,097,307	379,155	658,739	1,268,854	3,404,055
Ophthalmia neonatorum	3? 32	20	44	9	108
Optic atrophy	2? 28	16	25	6	77
Congenital cataract	2? 14	5	18	5	44
Corneal ulceration	5? 5	2	17	6	35
Uveitis	2? 10	4	12	4	32
Trauma, simple	3? 4	6	16	4	33
Trauma and sympathetic ophthalmia.....	2? 5	2	11	8	28
Trachoma	2? 4	3	20	3	32
Hydrophthalmus	2? 7	6	11	2	28
Microphthalmus	1	1	8	5	14
Retinal degeneration	3? 3	2	6	1	15
Prenatal corneal opacity	1? 2		5		8
Chorioretinitis	4	1	7		12
Parenchymatous keratitis	2	1	4		7
Retinitis pigmentosa	1		5	1	7
Postocular amblyopia		1	3		4
Keratoconus			3		3
Anophthalmus		1	1	1	3
Retinal detachment	1	1		1	3
Prenatal uveitis		1	1		2
Prenatal dislocation of lenses	1		1		2
Myopia		1	1		2
Aniridia			1		1
Coloboma of iris			1		1
Neuroretinitis	1				1
Essential phthisis of conjunctiva.....	1				1
Phlyctenular keratitis				1	1
Cataract	1				1
Unknown (Cataract obscured fundus)			2		2
Totals	127	73	223	57	507
To each 100,000 of population	12	19	34	5	15

TABLE 8. ESTIMATE OF BLINDNESS DUE TO VENEREAL DISEASE

	Totals	Number of Pupils Per cent. due to V. Disease	Number due to V. Disease
Ophthalmia neonatorum	108	85%	92
Optic atrophy	77	75%	58
Uveitis	32	15%	5
Microphthalmus	14	20%	3
Chorioretinitis	12	75%	9
Parenchymatous keratitis	7	100%	7
Totals			174
Percentage of 507			34%

TABLE 9. ESTIMATE OF PREVENTABLE BLINDNESS

	Totals	Number of Pupils Per cent. Prevent.	Number Prevent.
Ophthalmia neonatorum	108	100%	108
Optic atrophy	77	75%	58
Congenital cataract	44	75%	33
Corneal ulceration	35	75%	26
Uveitis	32	15%	5
Trauma, simple	33	100%	33
Trauma with sympathetic ophthalmia	28	100%	28
Trachoma	32	100%	32
Microphthalmus	14	20%	3
Chorioretinitis	12	75%	9
Parenchymatous keratitis	7	100%	7
Phlyctenular keratitis	1	100%	1
Total			343
Percentage of 507.....			68%

Conclusions. If statistical tables are clearly set forth, as it is earnestly hoped the above are, the reader can easily and accurately draw his own conclusions. I have purposely refrained from including extended explanations and deductions. Figures speak for themselves.

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A total of 200 analyses of the blood in whooping cough have been made by Joseph C. Regan and Alexander V. Tolstouhov, Brooklyn (*Journal A. M. A.*, Jan. 16, 1926). Distinct and apparently significant changes have been encountered, the most characteristic of which were (1) a lowering of the hydrogen ion concentration of the blood and (2) a diminution of the inorganic phosphorus content.

THE ENTERITIS OF 1925

JOHN ZAHORSKY, M.D.

ST. LOUIS

The purpose of this paper is to record some peculiarities of the diarrheal diseases in children during the summer of 1925 in St. Louis. To this is added a summary of the therapeutic procedures employed and a discussion of the modern theories of gastroenteric intoxication in the light of this clinical experience.

The cases occurred in my private practice and about 220 patients came under observation. The summer was characterized by very marked variations in temperature; periods of cool weather were followed by excessive heat. The usual types of the disease were encountered, most of them very mild and not showing the characteristic signs of an infectious enteritis, such as fever, pus cells in the stools, etc. Even the severe types rapidly recovered under the usual treatment, unless the typical symptoms of gastroenteric (alimentary intoxication) appeared.

The severe cases, with two exceptions, did not show the symptoms of dysentery (visible blood and mucus), nor the characters of cholera infantum (rice water discharges), but were manifested by a moderate diarrhea of thin watery, or mucous stools, usually containing large numbers of leucocytes and giant cells. The symptoms indicated an enteritis rather than a colitis. Vomiting was protracted in only two of the fatal cases.

The temperature as a rule was not high and

*Read before the St. Louis Pediatric Society, Oct. 16, 1925.

the prostration at first was not marked, but a very striking feature in the severe cases was the early impairment of the skin elasticity, a phenomenon usually classed as a symptom of dehydration. This inelasticity appeared on the second and third day of the disease, often, apparently, before the body could have lost enough fluids to produce true anhydremia. When this inelasticity appeared no therapeutic remedy caused it to disappear entirely, although subcutaneous and intraperitoneal injections of saline solutions produced a temporary improvement.

With these changes in the integument the baby soon showed the other characteristic symptoms. Somnolence, prostration, sunken red eyes, cold dusky skin, a slowing of the pulse and increased respiration.

In 220 cases of summer diarrhea, 18 cases may be regarded as the type showing the severe symptoms of intoxication; of these 18 cases, 15 died. As the mortality rate of my cases for several years has not been more than 3 or 4 per cent. the increase this year naturally brings up the question as to the cause of this high mortality. However, to show that a high mortality was prevalent in St. Louis, I append a few figures kindly furnished by Dr. Starkloff, our Health Commissioner:

TABLE I.
MORTALITY. DIARRHEAL DISEASE

	INFANTS UNDER 2 YEARS.		ST. LOUIS	
	1922	1923	1924	1925
June	6	6	15	9
July	5	20	16	43
Aug.	13	39	33	47
Sept.	20	25	23	51
	—	—	—	—
Total	44	90	87	150

My own conclusion is that the virulence of the virus that causes enteritis was greater this summer. The infection involved the small intestine in greater numbers, although the vicissitude of the weather as a predisposing cause must also be given as an etiologic consideration.

My method of treatment was similar to that of other summers, except that I employed hospitalization more frequently and attempted to ward off the dangers of anhydremia by more vigorous use of subcutaneous and intraperitoneal injections of Ringer's solution. By these measures we succeeded in increasing the weight and bringing about a slight improvement, but the effect was temporary and the fatal outcome inevitable. My impression is that a drink of salt water subcutaneously or intraperitoneally is not nearly as efficient as twice or three times that quantity of pure water given orally.

In three cases we used the intramuscular injections of human blood or blood serum with no permanent benefit.

The feeding invariably began with a cereal decoction to which a small quantity of butter-milk, protein milk or casein was added after several days. Two cases were given pure protein milk for a few days. Human milk was tried in 3 cases, but even when highly diluted this almost invariably produced an acute abdominal distension. An attempt to increase the vitamin content of the intestine by feeding orange juice or vegetable broths had no result. The figures show that a salted meat and vegetable soup are an excellent means of increasing the water in the tissues.

Symptomatic medicinal treatment was used occasionally.

This experience throws considerable doubt on the prevailing theories of gastro-enteric intoxication. Certainly, the hypothesis that it is a primary metabolic disorder, a functional disturbance, due to the accumulation of sugar or salt is not acceptable. That the phenomena are accompanied by a deficiency of water in the tissues and the blood has been clearly demonstrated by Marriott and his co-workers but this probably is only a concomitant symptom and not the actual cause of the intoxication. Certainly, clinical experience shows that the dehydration following starvation or excessive vomiting is quite different from the severe intoxication complicating an enteritis. The former is easily relieved by giving water in some form, while the apparent dehydration in intoxication is only slightly and temporarily benefited.

Our conclusion from clinical experience is that there is a true toxic substance in the intoxication of enteritis which produces the symptoms even when the water loss is small and the administration of water is ample. Apparently the tissues will not retain the water in intoxication.

Finkelstein and his pupils are responsible for throwing aside the old hypothesis that some bacterial toxic product originating in the intestinal contents or intestinal wall is the real source of this intoxication. What an enormous amount of work has been done in trying to find in sugar, salt, other mineral substances, acids and alkalies, the actual offending substance of intoxication! Meanwhile the practitioner, who always asks for some working hypothesis, has been hopelessly befuddled with the ever changing theories.

Personally, I feel that the recent work of the Dutch school is bringing us back again to a safer foundation. No pediatrician can read the recent article by Plantenga (Yashrb. f. Kind, 109, No. 314, page 195) without becoming a

skeptic of the modern theory that toxic intermediary products are the primary cause of this intoxication. To my mind he conclusively proves experimentally that there is such a substance as a colitoxin which produces in young calves all the symptoms of intestinal intoxication, as we know them in infants.

We must go back to a study of the intestine. When inflamed or poisoned the epithelial lining loses its protective power and substances enter the circulation which should be excluded. The food administered is not absorbed and becomes a coliculture medium. The dead epithelial cells also furnish food for the colon bacillus and there is elaborated this powerful poison which induces the general symptoms of alimentary intoxication.

We will again have to go back to intestinal antiseptics, laxatives, and specific sera. We need first a nontoxic antiseptic that has a powerful bacteriostatic effect in the intestine. We need an effective coli serum. We must immunize our babies when young against colon bacilli by suitable vaccines. We need a curative serum for the Flexner dysentery, so commonly the cause of enteritis. Possibly we may find an intravenous antiseptic which may be of service in these infections. It is along these lines that my own efforts shall be directed during the next summer.

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IMPORTANCE OF EAR, NOSE AND THROAT DISEASES IN INDUSTRIAL EFFICIENCY*

A RESUME OF EIGHT MONTHS SPECIAL WORK FOR THE TERMINAL RAILROAD ASSOCIATION

I. D. KELLY, JR., M.D.
ST. LOUIS

There was a time not many years ago when to seek the services of an ear, nose and throat specialist was considered decidedly fadish. It was a necessity only to those so unfortunately ill that their family doctor, unable to cope with the situation longer, referred them elsewhere for the relief of their pain. Even today it is not unusual to hear a patient say that he has come to a specialist for the first time to receive treatment for a severe head cold or sore throat, because only now has he overcome the feeling of being effeminate, which such a visit entailed.

In hospitals ear, nose and throat work was viewed as an unimportant minor specialty, consultations being requested only when the patient manifestly presented some special com-

plication. This era when otolaryngologists were considered but "swabbers and sprayers" passed when it eventually dawned upon the medical profession and the public in general, that many of the ills of humanity were directly traceable to ear, nose and throat affections and could be diagnosed and relieved only by the scientific and well directed efforts of men in this specialty. Hospitals soon found this work one of its most important departments and a necessary adjunct to both medicine and surgery. Even industrial organizations began to heed the cry for special work in their sick benefit associations because of the impetus it gave to industrial efficiency. Finally America's participation in the war, because of the army's compulsory ear, nose and throat work on the soldier personnel, brought home to the people of this country the full significance of otolaryngology. The people in general became so familiar with the benefits derived from this work that they now voluntarily seek the specialist or demand from their employer the privilege of consulting one in their sick benefit organizations or hospital association.

From the workers' point of view the change in attitude toward the specialty has a deep significance. They consciously or unconsciously realize that to be relieved of their ear, nose and throat affections means not only relief from pain, illness and discomfort, but means health and increased efficiency as well.

Psychologically it is a well recognized fact that a man in pain or one who is sick is not as efficient as a normal man. Likewise it is an interesting psychological fact that a man whose nose becomes blocked by inflamed mucous membranes is mentally below par. He may become transiently as incapacitated as the man with faulty eye sight or hearing. A discriminating patient of mine will arrive in my office with the statement that he feels 25 per cent. or 15 per cent. inefficient because his nose is blocked and he is suffering with a resulting headache. With the clearing of his nasal passage his mental acuity simultaneously returns until a feeling of normal efficiency is reached.

It would be an extremely interesting and illuminating research problem to carry on a series of mental tests to establish the grades of mental inefficiency caused by nasal respiratory blocking, sinusitis, nasal headache, chronic tonsillitis, etc., conditions insufficient in themselves actually to incapacitate the worker but which manifestly retard his mental acuity.

From these lesser degrees of inefficiency the employer is faced with the additional problem of the worker who is repeatedly demanding time off for treatment because of some ear, nose and throat disease, or becomes so ill that

*Read before meeting of Wabash Railroad Surgeons, St. Louis, November 17, 1925.

he is completely incapacitated for a longer or shorter period.

In an effort to throw some light upon the problem of industrial efficiency in relation to ear, nose and throat diseases and the hope of arriving at some tangible deductions which might aid both the employer and the employee, together with the doctors concerned with this problem, I have analysed the ear, nose and throat work done by me in the past eight months for the Terminal Railroad Hospital Association. During this time four hundred employees of the railroad applied for office treatment and were classified as new cases, receiving a thorough ear, nose and throat examination and a resulting diagnosis. With but few exceptions these cases voluntarily sought the advice of a specialist relying on no other aid than the classified list of the Association's medical staff furnished to them. Because of the volume of treatment work this number of new cases would entail due to repeaters, a rigid policy was established that only treatments would be given when necessary to effect relief or produce a cure, and that surgical operations would be insisted upon when it was determined that such a procedure would not only cure with dispatch, but would prevent a possible future recurrence. With this plan fully enforced, 1350 office treatments nevertheless were given and these, translated into terms of business efficiency from the railroad's point of view, were sheer waste. An analysis of the diagnosis in these cases because of their frequent or infrequent occurrence suggested their grouping into two general divisions, group one containing the frequent diagnoses, group two, those of unusual occurrence. Heading the first group were 127 diagnoses of deflections of the nasal septum; 77 of tonsillitis, acute and chronic; 51 of impacted cerumen; 50 of otitis externa with furunculosis or eczema; 39 of rhinitis, turgescens and hypertrophic; 38 of otitis media catarrhalis, acute or chronic; 37 of rhinitis serous or muco-purulent, acute or chronic; 33 of otitis media suppurativa, acute or chronic; 32 of pharyngitis, acute or chronic; 20 of laryngitis, acute or chronic.

The exceedingly large number of deflected nasal septums, not only irregularities of the septum but marked deviations, found in this group is significant because it is an established fact that these deflections are well known causative factors in ear, nose and throat trouble. Undoubtedly the frequency of this finding is due largely to the type of men employed in railroad work. Tonsillitis came next in frequency, therefore the tonsils, together with the deflected septums, each considered singly or in combination one with the other, would suggest their importance as underlying

factors in producing much of the rhinitis, pharyngitis and laryngitis, together with the otitis medias, both purulent and catarrhal, seen in this group. The large number of impacted cerumen cases also found in this group are in a measure occupational, while the numerous cases of otitis externa resulted largely from improper hygiene of the external auditory canal. Grouped among the cases of otitis media suppurativa were nineteen chronic discharging ears with partial or complete destruction of the ear drum. These patients gave a history in most instances of the aural discharge antedating employment with the railroad and having its onset in childhood.

The second or unusual group contains diagnoses running through the field of modern otolaryngology headed by fourteen diagnoses of acute and chronic suppurations of the maxillary sinus; ten ethmosphenoiditis; nine rhinitis atrophica; five frontal sinusitis, and includes a host of other diagnoses, such as nasal ganglion, neurosis, foreign bodies in ear and nose, asthma, arthritis, goiter, bullous turbinates, carcinoma of the esophagus, nasal deformities and fractures, and still others too numerous to mention. It is apparent that this group also contains much that can be directly associated with the diagnoses considered in the first group as causative factors; as for example, the maxillary sinus suppuration, eustachian salpingitis, ethmosphenoiditis, frontal sinusitis, tracheitis, nasal polypii, while the remaining diagnoses might be considered accidental, because of their infrequency in occurrence and their disassociation from conditions enumerated in group one.

When it was definitely determined that surgical operation was necessary to effect a permanent cure, the patient was hospitalized for from twenty-four to forty-eight hours where the operation was performed under proper conditions and with gratifying results.

In practically all instances there have been no repeaters among the patients on whom operations were done and the postoperative treatment carried to completion. This is due to the fact that the vulnerability of these patients to infection was effectually relieved by removing the cause so that they no longer felt the necessity of seeking the aid of a specialist.

In the operative analysis it is interesting to note again that the greatest number of operations were performed to relieve the nose and throat conditions found in group one. Of the operations, twenty-six were resections of the nasal septum with removal of turbinate hypertrophies when present; eighteen tonsillectomies with removal of the adenoid when not atrophied. There is then a sudden drop in number to three ethmosphenoidal exenterations with

polyp removed when present; two removal of turbinate hypertrophies; two broncho-oesophagoscopies; one radical maxillary antrum drainage and one turbinate cauterization. Because of the long period of hospitalization necessary, no radical mastoid operations were attempted.

It would seem entirely reasonable to assume that an efficient ear, nose and throat service is important to any large industrial organization, not only because the employee now demands this special work in the same ratio that he demands general medical and surgical care, but because it is easily demonstrated that a large majority of the ear, nose and throat diseases can be permanently relieved by timely treatment and surgical removal of the underlying cause. As a consequence the workman's efficiency is increased by the simple expedient of making it possible for him to stay on the job.

Were it deemed advisable by the employer, I believe it possible to cut down this large volume of ear, nose and throat work to that which is necessary only to care for the endemic or accidental cases. To do this the medical staff of an industrial organization must be given the authority to exclude from employment, through a preliminary examination, men with abnormal deflections of the nasal septum and enlarged follicular or chronically inflamed tonsils until such time as they have received proper surgical treatment. They should also exclude men with chronically discharging ears or with ears showing residual suppurations, as well as those suffering with catarrhal middle ear deafness.

The impacted cerumen and otitis externa cases which were found to occupy such an important position in group one, and there suggested as being largely occupational because of such employment, could likewise be largely avoided. It would only be necessary to instruct the men to refrain from sousing water into their ears while washing, and to avoid picking or scratching their ears until after they had consulted an aurist.

The otolaryngologist as well as the industrial organization itself, shorn of the fertile material outlined above, would thus be freed from the major volume of such work.

The Terminal Railroad has, I understand, a turn-over in their personnel of some fifteen hundred men yearly; consequently unless medical supervision is employed in some such manner as suggested above this replacement must counteract any increase in efficiency among the personnel made possible by corrective ear, nose and throat work done in their Hospital Association.

DIAPHRAGMATIC HERNIA

Carl A. Hedblom, Madison, Wis. (*Journal A. M. A.*, Sept. 26, 1925), analyzes 378 cases of diaphragmatic hernia. Excluding those hernias due to war injuries, 60.1 per cent. were due to trauma; 14.7 per cent., congenital; 14.8 per cent., acquired, and 10.3 per cent. of indeterminate origin. Twenty-two patients were children under 10 years of age. The duration of the symptoms in the traumatic cases was three years or under in about 80 per cent., while in those of congenital and acquired origin it was more than three years in 54 per cent. In a considerable proportion of those of traumatic origin there was a latent period between the injury and the onset of symptoms of hernia, and in a large proportion months or years elapsed before operation. The symptoms and signs in diaphragmatic hernia were variable. All the abdominal organs except those in the pelvis were a part of the hernia content in some cases. The stomach was herniated in 194 cases, the colon in 158, the intestines in fifty-six and the spleen in twenty-four. A sac was noted as present in twenty-four. Of abdominal symptoms, pain, vomiting, constipation and distention were most common; of those referred to the thorax, pain, dyspnea and dysphagia were the most frequent. Tympany and dulness to percussion, heart displacement and splashing and gurgling in the thorax were the most constant physical findings. Not infrequently, the physical findings were very few. Diagnosis was made on clinical or roentgen-ray findings in 59.5 per cent., at operation in 30 per cent. and at postmortem examination in 6.3 per cent., and it was uncertain in 4.3 per cent. The diagnosis was made late in the cases eventually recognized. Laparotomy was performed in 40.3 per cent., thoracotomy in about 39.2 per cent., and some combination of laparotomy and thoracotomy in 20.4 per cent. The hernia opening was centrally situated in 22.7 per cent., lateral in 29.4 per cent., posterior in 13.5 per cent., at the esophageal hiatus in 20.2 per cent., and variously situated in the remaining cases. There were seven cases, three in the Mayo Clinics series, of parasternal hernia. The hernia opening was sutured in 72.6 per cent. of 362 cases, was reduced but not sutured in 11.8 per cent., could not be reduced in 9.7 per cent., and was found at necropsy in 5.9 per cent. The hernia was successfully repaired in 49.2 per cent. of 146 cases subjected to laparotomy and in 89.4 per cent. of 142 cases in which the thoracotomy approach was used. Of the nineteen patients operated on at the Mayo Clinic, fifteen recovered from operation; two with congenital absence of the left diaphragm died one and eight years after operation, and one had a recurrence but has been symptom-free since the second operation. Twelve have remained free from symptoms of recurrence. Four, 21 per cent., died, respectively, of shock, cyanosis, pulmonary embolus and sepsis. Of the total number, 251 patients (66.4 per cent.) recovered from operation, but in forty-two of these cases no attempt was made to suture the hernia. The operative mortality in 126 cases of obstruction was 53.1 per cent.; in 252 without obstruction, 23.8 per cent. The operative mortality, excluding cases of obstruction and those with omentum prolapsed through the chest wall, was 22.3 per cent. following laparotomy, and 19.8 per cent. following thoracotomy. End-results were reported in only a small percentage of the cases. Of twenty-three patients in whom the opening was closed by suturing an adjacent organ into it, four were reported to have died later of intestinal obstruction, and in four the hernia recurred.

THE JOURNAL

OF THE

Missouri State Medical Association

MARCH, 1926

EDITORIALS

PLANS FOR THE PROGRAM OF THE SIXTY-NINTH ANNUAL MEETING

ST. LOUIS, MAY 17, 18, 19, 20

The Program Committee is preparing to give the members who attend the annual meeting at St. Louis a maximum number of clinics and among these to conduct four diagnostic clinics. The number of papers to be read will be limited but we believe there will be a sufficient diversity of subjects presented in manuscript form to maintain the interest of the members and convey to them some of the newer thoughts in the treatment of disease.

Several guests have been invited who will be asked to conduct clinics but for the most part these clinics will be in charge of the members of our own Association.

The House of Delegates will meet on Monday morning, May 17, in the Auditorium of the St. Louis University Law School and continue its sessions throughout the day. For those members who arrive on that day and do not attend the sessions of the House of Delegates the committee is preparing some clinical sessions and will conduct clinical sessions on Friday and Saturday for those who wish to remain after the close of our regular annual meeting. The probable outline of the program follows:

MONDAY, MAY 17

- 9:30-12 a. m. House of Delegates. Auditorium, St. Louis University Law School.
- 1:30-5 p. m. House of Delegates. Auditorium, St. Louis University Law School.
- Clinics for those members who do not attend the House of Delegates.

TUESDAY, MAY 18

- 8-12 a. m. General clinics in various hospitals.
- 1-3 p. m. Diagnostic clinic. Auditorium, St. Louis University Law School.
- 3-5 p. m. Papers and discussions. Auditorium, St. Louis University Law School.

WEDNESDAY, MAY 19

- 8-10 a. m. Diagnostic clinic. Chest diseases. Auditorium, St. Louis University Law School.
- 10-12 a. m. Diagnostic clinic. Heart diseases. Auditorium, St. Louis University Law School.
- 1-5 p. m. Papers and discussions. Auditorium, St. Louis University Law School.

- 8 p. m. President's Address and Reception. Library, St. Louis University Law School.

THURSDAY, MAY 20

- 8-12 a. m. General clinics at various hospitals.
- 1-3 p. m. Diagnostic clinic. Auditorium, St. Louis University Law School.
- 3-5 p. m. Symposium on nephritis. Auditorium, St. Louis University Law School.

A more complete arrangement of the program will appear in the April issue of THE JOURNAL.

COUNCILOR DISTRICT MEETINGS

CHILLICOTHE AND EXCELSIOR SPRINGS

Two very successful district meetings were conducted in February, one at Chillicothe on February 8, the other at Excelsior Springs on February 9. The attendance of physicians at the Chillicothe meeting was limited on account of the bad condition of the roads but there was a sufficient number present and the enthusiasm was so pronounced as to leave no doubt that these meetings are of great importance to the organization and are highly appreciated by the lay people who are present.

At Chillicothe three meetings were held. A luncheon where Dr. North was the guest of honor and addressed the members of the county societies in the Eleventh Councilor District. In the afternoon Drs. Logan Clendening, O. Jason Dixon and G. Wilse Robinson, all from Kansas City, and Dr. R. B. H. Gradwohl, from St. Louis, delivered addresses on technical subjects that were highly interesting. Dr. North also spoke at this meeting encouraging the members to take an active interest in medical legislation and the promotion of cooperation between the physicians of the county and the representative clubs such as the Chamber of Commerce, Kiwanis and Rotary, in medical legislation and the protection of public health.

At six o'clock in the evening Dr. North, Dr. Clendening, Dr. Dixon, Dr. Robinson and Dr. Goodwin were guests of the Kiwanis Club. The members of that club were most agreeably surprised when Dr. North and the others spoke of the importance of such bodies as the Kiwanis Club taking an active interest in the work of the county medical society and the state medical association in making our medical laws protective of the health of the people and remedy the defects now existing whereby such harmful practices as the sale of medical diplomas can be followed with impunity, there being no statutory prohibition and consequently no punishment for such fraudulent practices. In the evening members of the Chamber of Commerce and other clubs were present and Mr. E. G. Dille, the superintendent of the public schools.

Here again there was evidenced a willing spirit to cooperate with the county and state associations in this humanitarian labor. Mr. Dille made a very impressive address at this meeting and pledged himself in thorough harmony with the purposes as outlined by Dr. North and the other speakers. He is particularly anxious to impress upon the youth in the public schools the need for intelligent understanding of hygienic principles and the objects of health protection.

Dr. J. H. Timberman, Chillicothe, Councilor of the Eleventh District, presided at the meetings.

At Excelsior Springs, the Twelfth Councilor District, there were over fifty people gathered at the banquet table. Among these was the mayor of the city, the superintendent of Excelsior Springs schools, State Senator Gordon, and the representatives from three of the counties in the district, and Assistant Attorney-General J. Henry Caruthers.

Dr. North addressed the gathering with much force and made it plain to those who are not physicians that the county medical society and the state medical association are not engaged in a warfare on cults or other followers of the healing art, but that we are trying to protect the people from uneducated and untrained persons treating the sick by requiring all those who hold themselves out as healers of the sick to possess sufficient knowledge to enable them to treat the sick with an understanding mind and a knowledge of the conditions of the patient whom they are supposed to be treating. In other words, we want all persons who desire a license to treat the sick, to know the human body in its normal state and the fundamental principles that guide the healer in his attempt to correct abnormal conditions.

Senator Gordon made an excellent talk upon the conditions the medical profession meets in the legislature and announced that he had always endeavored to follow the advice of reputable members of the profession in his district on medical questions and intended to do so in the future.

The superintendent of schools also gave a splendid talk upon the high importance of training the youthful mind to think in terms of prevention of disease, the principles of hygiene and the relation between the care of the body and good health.

Assistant Attorney-General Caruthers, who has conducted the legal affairs of the State Board of Health, spoke on the defects in our medical laws. He made it plain to the audience that our medical laws were seriously defective and that in order to correct these defects it was very necessary for intelligent laymen such as those represented at this meeting

to interest themselves in the passage of suitable amendments. The physicians have done and will continue doing their part but in legislative work of this kind, which is entirely in behalf of the people, the physicians need the support of the laymen—in fact, without such support success is practically impossible. He described the work of the board of health in attempting to revoke licenses of physicians whose preliminary and medical qualifications have been shown to be fraudulent. He also mentioned the work of the legal department of the state in trying to revoke the charters of medical schools found guilty of selling medical diplomas.

After this meeting adjourned Dr. R. B. H. Gradwohl, of St. Louis, gave a motion picture demonstration of methods of making blood sugar tests.

Dr. Spence Redman, Platte City, Councilor of the Twelfth District, presided at the meetings.

PROGRESS OF THE ASSOCIATION FOR CRIMINAL JUSTICE

The great importance of the work of the Missouri Association for the Administration of Criminal Justice can now be forecast with confidence. When the entire group of reports, three of which have been released, has been published it will constitute a volume which will be read with deep interest all over the United States.

Missouri is pioneering in this field. Instead of saying, "Show me," it is taking the lead in showing the way to other states. We need this very critical self-analysis if we are to mend our ways. The report released at the general meeting of the Association at Jefferson City on January 12 gave an excellent exposition of the high aims and deep earnestness of the enterprise. The report on "Pardons and Paroles" was scholarly, thorough, and evoked, as it should, wide comment. The report on "Police Administration," released during February at Kansas City, went deeply into our chief causes of failure in this important activity.

The third report released under the auspices of the St. Louis Medical Society, February 16, gives a very clear picture of what a poor makeshift our present inherited coroner is in the state at large. That St. Louis has been fortunate in the administrations of its coroner's office does not in fact lessen the value of the report's recommendation, which is substitution of the medical examiner for the coroner.

Massachusetts has been operating under this plan for many years and has found it successful. The effort is to substitute trained medical men for the present largely untrained persons

who now investigate causes of death in obscure cases.

We commend all three reports for careful study and especially the last named because it deals so largely with what is very properly a medical problem in the administration of criminal justice.

A BIRTHDAY PARTY FOR DR. JACOB D. SMITH SHELBY, MO.

There was great rejoicing in the town of Shelby, Mo., on the evening of January 25. The townspeople paid their tribute of esteem and affection to their good old doctor, Jacob D. Smith, and gathered in the Baptist church to celebrate his seventy-seventh birthday.

It is indeed a great thing to write in the book of life for seventy-seven long years, but it is even a greater thing to have filled its pages with honest effort and achievement. For fifty-four years Dr. Smith has practiced in this community and shared with its people their sorrows and their joys.

The love for this service, and a nobler service on this mundane sphere does not exist, was most happily evidenced by the large gathering of friends who by their expressions of "good wishes and many happy returns of the day," made the good old doctor's heart throb with joy. With all the speech-making scintillating with gladness and mirth, there occasionally was strummed a chord of pathos that must have tugged at the heart strings of the dear doctor. Dr. Francis Reder, of St. Louis, who has known Dr. Smith for some thirty-seven years and who was privileged to be present at the birthday party, reports that the doctor appeared in excellent health and looked younger by fully ten years. The happy smile so characteristic of this charming man seemed even more in evidence than ever. And why not? Was this not an occasion for great rejoicing? What greater tribute can be offered by a townspeople than to honor a life long friend whose ministrations and advice in sickness and in health brought to them the solace and comfort they craved? Truly it was a wonderful appreciation and its only interpretation is one of gratitude and love. A radio set was presented to Dr. Smith, the gift of the members of the Shelby County Medical Society, the presentation being made by Dr. L. L. Smith, the President of the Society.

Mr. George W. Humphrey, an attorney of Kansas City, acted as toastmaster at the banquet table and after Dr. Smith had responded to demands for a speech, Mr. Humphrey called upon the following to talk: Dr. J. A. Furnish,

Shelby; Dr. A. B. Miller, Macon; Dr. Francis Reder, St. Louis; Mr. Harry Libbey, attorney, Shelby; Hon. James T. Lloyd, Canton; Mrs. Roy Lasley, Shelby, who was responsible for the arrangement of the party, merely responded to an introduction by the toastmaster; Mrs. Adolph Volmer, Shelby; Mrs. A. B. Miller, Macon, gave a toast to Dr. Smith.

Letters were received from friends all over the country and from Mexico and Canada.

NEWS NOTES

Dr. James E. Stowers, Kansas City, has been appointed fire department physician to succeed Dr. Charles E. Wilson, deceased.

Dr. Damon Walthall, Kansas City, gave a talk on "Mental Hygiene and Child Training" before a meeting of the Pre-School circle on the afternoon of February 6. His subject covered the psychology of disciplining children, the psychology of example and of environment.

Drs. J. J. Singer and Evarts A. Graham, St. Louis, were the guests of the American Congress on Internal Medicine, which Congress convened in Detroit, February 22 to 28. Dr. Singer read a paper on "Diagnostic Pneumo-Thorax," and Dr. Graham presented a paper on "Treatment of Lung Abscess."

Drs. W. T. Coughlin and John L. Tierney, St. Louis, were guests of the Tri-State Medical Society which recently met at Memphis, Tenn. Dr. Tierney read a paper on "Endocrine Glands," and Dr. Coughlin discussed "The Diagnosis of the Modern Treatment of Trigeminal Neuralgia Major—Tic Douloureux."

Providing the citizens of Sedalia subscribe \$200,000 in stock for a new hotel to be erected in Sedalia, the Hon. J. H. Bothwell, Sedalia, has offered to purchase \$50,000 in stock in the hotel. In addition Mr. Bothwell proposes to place in trust \$100,000 in liberty bonds and will provide that at the time of his death the entire sum of \$150,000 shall be used for the erection of a modern hospital at Sedalia. During his life the income from these sums will be paid to Mr. Bothwell.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on the dates specified: At Washington, D. C., March 15; Chicago, March 15;

New Orleans, March 15; San Francisco, March 15. Candidates must not be less than twenty-three nor more than thirty-two years of age. Other requirements are graduation in medicine from some reputable medical college, one year's hospital experience or two years' professional practice. Oral, written and clinical tests must be passed before a board of medical officers. Further information may be obtained by addressing the Surgeon General, U. S. Public Health Service, Washington, D. C.

Pre-school age clinics for children under seven years of age, giving free medical examinations, has been inaugurated by St. Louis County. Physicians and nurses will be furnished by the State Board of Health and clerical assistance and free transportation for all mothers requesting it will be provided by the Parent-Teacher Association. In addition to the medical examinations instruction as to proper care of growing children will be given the mothers. The clinics will be so located that one will be available to each community in the county. This is one of the new features of child health work which, in cooperation with the State Board of Health, the St. Louis Tuberculosis Society is sponsoring.

The Twelfth Annual Meeting of the Medical Women's National Association will take place April 18-19, at Dallas, Texas, in conjunction with the American Medical Association meeting. The headquarters are the Hotel Baker. Dr. May Agness Hopkins, Medical Arts Bldg., Dallas, Texas, is the Chairman of the Committee on Arrangements.

Women intending to go to this meeting are urged to make reservations either through Dr. Hopkins or directly at the Baker Hotel.

The terms for railroad transportation should be looked up in the *Journal A. M. A.*, but in many places where there are large numbers of members of the Medical Women's National Association, special cars for the women may be run.

Medical women passing through New Orleans are especially invited to stop over there and will meet with a cordial welcome from the New Orleans medical women, represented by Dr. Elizabeth Bass, President of the Women Physicians of the Southern Medical Association.

The Texas women, cooperating with the chairman, Dr. Hopkins, are making most attractive arrangements for the meeting. All medical women, whether members of the M.W.N.A. or not, are cordially invited to participate in this meeting.

OBITUARY

JAMES R. DANIEL, M.D.

Dr. James R. Daniel, Clarence, a graduate of the Missouri Medical College, St. Louis, 1888, died January 25, 1926, at Rochester, Minn., aged 65 years. He was a member of Shelby County Medical Society and of the State Association.

THOMAS O. PENDLETON, M.D.

Dr. Thomas O. Pendleton, Pilot Grove, a graduate of the Missouri Medical College, St. Louis, 1877, died in January, of heart disease, aged 73 years. He was an honor member of Cooper County Medical Society and of the State Association.

GEORGE W. MILLER, M.D.

Dr. George W. Miller, Joplin, a graduate of the Bellevue Hospital Medical College, New York, died January 13, 1926, following a long illness, aged 80 years. He was an honor member of the Jasper County Medical Society and of the State Association, and a Fellow of the American Medical Association.

JOHN B. HANCOCK, M.D.

Dr. John B. Hancock, Newtonia, a graduate of the Missouri Medical College, St. Louis, 1885, died February 14, 1926, aged 62 years. He was a member of Newton County Medical Society and of the State Association, and a Fellow of the American Medical Association.

The Newton County Medical Society adopted the following resolution on the death of Dr. Hancock:

It is with profound sorrow that we announce the death of our beloved co-laborer, Dr. John B. Hancock. Dr. Hancock was born in Russell County, Ky., January 11, 1864, and died in Newtonia, Mo., February 14, 1926. He was educated in the public schools of Newtonia, afterwards attending the Missouri Medical College, from which he graduated in 1885. He practiced his profession with credit to himself and friends until his death and showed by a life of devotion to humanity his great love for mankind. He was much loved and was a good doctor and a stalwart Christian gentleman.

D. E. CULLERS, M.D., Secretary.

CHARLES E. WILSON, M.D.

Dr. Charles E. Wilson, Kansas City, died January 28, 1926, at the St. Joseph Hospital, as a result of blood poisoning, aged 62 years.

At the time of his death, he had held the office of examining physician and surgeon for the fire department of Kansas City for fifteen years. He had also been physician and surgeon for the fire and water board for some

time. He was a member of the staff of St. Joseph's Hospital for fifteen years, serving there until his death.

Dr. Wilson was born at Lexington, Mo., received his preliminary education at Wentworth Military Academy and his medical education at the Kansas City Medical College, at which school he lectured for several years following his graduation in 1889.

In addition to years of civic service, Dr. Wilson was a soldier and commander in both the Spanish-American War, in 1898, and in the late World War where he served with distinction. He was beloved of all who knew him whether as physician, soldier or friend. In his last sickness many offered their blood for the transfusion to save his life.

Dr. Wilson was a member of Jackson County Medical Society and of the State Association, and was a Fellow of the American Medical Association.

MEMORIAL ON THE DEATH OF DR. JOHN BLASDEL SHAPLEIGH

In the removal by death of Dr. John Blasdel Shapleigh, September 15, 1925, St. Luke's Hospital has lost one of the most revered members of the staff. He became a member of this staff in 1886, soon after two years study of otology in Vienna. He served the hospital diligently and faithfully throughout the rest of his eventful life. To those who had the rare privilege of knowing Dr. Shapleigh as student, friend, companion and teacher, his steadfastness and loyalty were outstanding characteristics. He came to the study of medicine with a well equipped mind, having graduated from Washington University, then in its struggling years. He had the high honor of establishing the Department of Otology in the St. Louis Medical College (now Washington University Medical School) and remained at the head of this department until 1922. He also had the honor of being Dean of the St. Louis Medical College during the years 1901-1902. Another honor, coming late in his career, was the Honorary degree of Doctor of Science, conferred by Washington University in 1925. He imbibed from the faculty of his Alma Mater the high ideals of medical education and self sacrifice which they practiced for so many years. During the last two or three years of his life he worked devotedly for the building campaign of the St. Louis Medical Society, of which he was chairman. The members of the staff of St. Luke's Hospital extend to his family and many friends, their sincerest sympathy in their great loss.

WILLIS HALL, M.D., Chairman.

BOOKS FOR LEISURE MOMENTS

Have you genius? Mary Austin says you have in her "Everyman's Genius" (Bobbs Merrill Company). Mary Austin believes that in every living human being there is a spark of genius. And the best part of it is she does not merely stop with telling you that you are afflicted, equipped or whatever you may choose to call it with genius, but she tells you how to discover it and how to develop it.

She illustrates one case very clearly. A young boy named Biggers spent hours sketching people, horses, rigs and carts. He sketched very minutely and was so praised by his friends that the people in the country side made up a fund to send him to Paris. Mrs. Austin waited twenty years to hear from him, but she never found the great artist Biggers. She found a man making his living drawing illustrations for medical works. Biggers told her he was sorry to have failed the people back home but he just wasn't an artist for, if left to himself, he would have become a farmer for that was what he liked. Mrs. Austin believes that had he been left in that environment of the farm with his sketching of horses, carts, harness, etc., he would have become an artist of country life, but instead, the Latin quarter of Paris hindered instead of helped him.

"Men," says Mrs. Austin, "have more talent than women, but genius is more often in the possession of women."

The literary genius gets a bit more advice than the genius of the other arts, possibly because Mrs. Austin in that field knows whereof she speaks, but she strives hard to give a message to all people. It is a worthwhile book and though you may not agree with Mrs. Austin, you will admit after reading the book that she has given you much food for thought. P. B.

"Uncommon Americans," by Don C. Seitz (Bobbs Merrill Company), is a most unusual and a most interesting book. Mr. Seitz has brought before us twenty-two Americans from the past with the interesting and unusual parts they played in life. He does not stick to any certain type or to any certain part of the country, but wanders from rock ribbed New England with Ethan Allen and Israel Putnam to the plains of the West with Brigham Young and Joseph Smith. We find the explorer, Edmund Fanning, and our first American traveler, John Ledyard. There is Peter Cartright, of the Methodist circuit, and another early evangelist, Charles Grandison Finney. The Civil War plays its part with General Mosby and General Forest, while James MacNeil Whistler and

Susan B. Anthony did enough in life to be classed with the "Uncommon Americans."

That this book is absorbing cannot be questioned because we feel that we are reading history and also because we of the present age like a touch of the unusual and we find in these unusual accounts of unusual people enough to hold our interest. The book is not a newspaper, of course, but its touch of the dramatic and heart interest reminds us of the large headlines of our dailies.

A certain well known editor once said to a young reporter: "People are interested in news; get that first. Understand that a dog biting a woman is not news, but a woman biting the dog is news. Try for that."

That is just what Mr. Seitz has done. He has given us the woman biting the dog and we like it.

P. B.

It is rather an unusual and interesting coincidence in the literary world that two books on Cardinal Newman should be published just a few weeks apart by two different authors. "Newman, as a Man of Letters," by Joseph J. Reilly, Ph.D., was published by The Macmillan Company, while "Cardinal Newman, A Biographical and Literary Study," by Bertram Newman, no relation, (The Century Company) followed a few weeks later.

Dr. Reilly, the American, writes a longer book and gives more intimate details while the Englishman, Bertram Newman, gives us a shorter work. Both are taken from the same point of view and with almost the same idea in presenting the work. The Englishman is less sympathetic with the Cardinal than the American but both agree that the nineteenth century was benefited greatly by the writings of this great man. An interesting fact is brought out that Newman first gave his world famous hymn, "Lead Kindly Light," the more ambiguous title of "The Pillar and the Cloud."

These books coming almost as it were on the heels of each other will give to many persons a better acquaintance with a man who, to them, has been simply a name.

P. B.

CORRESPONDENCE

MEMORIAL FUND TO ERNEST HAROLD BAYNES

Some months ago letters were sent to St. Louis physicians signed by Dr. W. W. Keen calling attention to the fund which is being raised as a memorial to Ernest Harold Baynes who died January 21, 1925. The interest on this fund is to be used for the support and comfort of the widow. The principal at her death is to be transferred to the American Association for Medical Progress, an organization

formed a few years ago to combat the activities of the anti-vivisectionists. Mr. Baynes investigated the sensational charges of the anti-vivisectionists, and, after finding them groundless, he devoted himself at great sacrifice to an effort to combat the anti-vivisectionist propaganda. Because of his reputation as a lover of animals he had unusual influence in this respect. At the time of the activities of the anti-vivisectionists in Saint Louis three years ago Mr. Baynes came here at his own expense to help combat their propaganda. His influence in helping to defeat them was very great.

In spite of the sacrifices both of time and money which Mr. Baynes made to help in winning the fight against the benighted influences of the anti-vivisectionists, the letter which was sent out to the physicians of the state of Missouri by Doctor Keen a few months ago received a total response which averaged only four cents from each doctor who received one of the letters. Medical education and scientific medicine in this city would have been almost destroyed if the anti-vivisectionists had won their fight. This response to a memorial fund to the man who was very instrumental in winning this fight makes so bad a showing that it would seem that the efforts of Mr. Baynes were unappreciated. There will be other struggles with the anti-vivisectionists in the future. The best means of combating them will be by an organization such as the American Association for Medical Progress. You can help very materially to keep scientific medicine and medical education alive in the state of Missouri by contributing generously to the Baynes Memorial Fund.

Your check should be made out to Ernest Harold Baynes Memorial, and sent to George C. Lee, Jr., First National Bank, No. 426 Boylston Street, Boston, Mass.

EVARTS A. GRAHAM, M.D., St. Louis.

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Seventeenth Meeting, January 11, 1926

1. PRESENTATION OF CASES.

A. ENDOMETRIAL TISSUE IN AN ABDOMINAL SCAR.—By DR. O. H. SCHWARZ.

Through the courtesy of Dr. George Ives, I am reporting a rather interesting lesion in an abdominal scar following a Cesarean section. The recent work of Sampson, which has revealed the frequency of endometrial tissue implantation on various pelvic organs, particularly the ovaries, has stimulated great interest in these lesions. Since this work has appeared there have been thirty-one cases reported where endometrial tissue was found in scars following abdominal operations. Nine of these were after operations in which the pregnant uterus had been opened either by intent or accident. Six of these cases followed Cesarean section. On finding endometrial tissue in the abdominal scar the origin is obviously from a transplantation of endometrial tissue as a result of opening the uterus.

The specimen which I am describing this evening was removed from the old scar of a woman 30 years of age, who two years previously had had a Cesarean section. A nodule about 1 cm. in diameter was situated in the upper portion of the abdominal

scar. There was no discoloration of the skin but the nodule was quite sensitive to pressure. It was excised and on microscopic examination there was found a considerable amount of glandular tissue, the cells simulating the epithelium of the endometrium; the glands were surrounded by a characteristic endometrial stroma. The gland tissue was imbedded in smooth muscle and connective tissue. To my knowledge, this is the seventh case to be reported of endometrium in the abdominal scar following Cesarean section.

2. ANAEROBIC STREPTOCOCCI: • THEIR ROLE IN PUERPERAL INFECTION.—By DR. W. J. DIECKMANN.

Our interest in anaerobic organisms was stimulated by the fact that frequent negative cultures were obtained in cases which we felt were obviously infected clinically. Anaerobic organisms were not sought for until July, 1924, when the Department of Obstetrics took over its own bacteriological work. Since that time all cultures have been grown both aerobically and anaerobically.

In the early part of this work we became interested in the previous researches of Schottmüller, in which he described the role played by anaerobic streptococci in various infections, and in which he described a certain anaerobic streptococcus which had definite characteristics, which he called the streptococcus putridus. In a monograph published by him in 1910, he reports a total of twenty-six cases, with a mortality of 13, or 50 per cent. These were chiefly cases of puerperal infection following abortion, although there were several cases of otitis media, gangrene of the lung, and pulmonary tuberculosis. The number of puerperal infections was 17, with 7 deaths, or 41 per cent. In puerperal thrombophlebitis due to anaerobic streptococci he reports a mortality of 78 per cent. He states that this report of twenty-six cases indicates that the anaerobic streptococcus is a virulent pathogenic organism and cannot be regarded as a saprophyte, because once having invaded the thrombi or blood stream it has pathogenic properties.

The streptococcus putridus as described by Schottmüller is an obligate anaerobe requiring an enriched medium for growth. The individual organisms are usually flattened and lie opposite one another. Eight, ten, or more diplococci form at times a tortuous chain. The organisms are Gram positive and produce gas in a media containing blood or blood serum. Infections with this organism are characterized by putrid lochia, high intermittent fever, and frequent chills. Respiration at first is not affected, but, as occurs frequently in this type of infection, when symptoms of pneumonia appear the respirations become rapid. A marked anemia develops.

With reference to the treatment, Schottmüller emphasizes that an exact bacteriological diagnosis is of the utmost importance. He has attempted ligation of the thrombosed veins in a number of cases, with poor results. Since we have had excellent results in the treatment of other puerperal bacteremias by blood transfusions, we thought they might be of value in these thrombophlebitic cases due to anaerobic streptococci. To date, we have had twenty-eight cases in which anaerobic streptococci have been recovered either from the uterus or blood stream. We have had five deaths in these twenty-eight cases, three being cases of thrombophlebitis, and the remainder peritonitis.

CONCLUSIONS

We conclude from this work that anaerobic streptococci are frequently the causative factors of

puerperal infection, that they cause chiefly local, foul-smelling lochia, and in their noninvasive state may be regarded as saprophytes. However, under certain favorable conditions such as in the thrombi of the uterine veins, they subsequently reach the blood stream and cause serious and even fatal local complications.

If the organisms are present in the uterus in overwhelming numbers, they may be carried to the peritoneum by way of the lymphatics.

In the treatment of these cases we recommend thorough cleansing of the uterus. In the event of a blood stream infection we recommend early and frequent blood transfusion to combat the anemia and bring up the patient's resistance. We feel that on account of the saprophytic properties of this organism in the noninvasive state, this method of treatment, with emphasis also on the nutritional needs of the patient, will undoubtedly give the best results.

Finally, in order that the real significance of this organism can be appreciated, it is necessary in all cases of suspected puerperal infection to grow uterine cultures, both aerobically and anaerobically, in order that the incidence and seriousness of this organism can be better appreciated.

DISCUSSION

DR. J. J. SINGER. The work of Dr. Dieckmann has been most interesting and of great value to us.

As soon as he discovered the anaerobic streptococcus in the blood, our attention was given to the condition of the lungs, and in several of the cases were able to trace the infarct from the first manifestation to the full development. One of these cases developed an empyema, and several developed abscesses.

Dr. Dieckmann deserves to be congratulated on this excellent piece of work.

DR. KENNETH L. BURDON: I have been much interested in this report because I have been studying anaerobic streptococci and other non-spore forming anaerobes for some time, and have been culturing some of the strains of anaerobic streptococci isolated by Dr. Dieckmann. I would like to emphasize a point mentioned by Dr. Dieckmann and very clearly illustrated by his work, namely, the value of making routine anaerobic cultures, particularly in the study of clinical conditions in which the microbic factor is obscure. The anaerobes, especially the non-spore forming parasitic kinds, have been much neglected, probably because of the very widespread impression that any work with anaerobes is necessarily complicated and difficult. This is not the case, for really simple anaerobic methods are available. I feel sure that the making of anaerobic cultures, routinely, as well as ordinary aerobic cultures from any clinical condition, would result in a truer picture of the microbic flora and in the discovery of more anaerobes, like these streptococci, whose medical importance might prove to be considerable.

3. DIVERTICULA OF THE DUODENUM.—By DR. JOSEPH W. LARIMORE.

Diverticula of the duodenum present a difficult clinical problem. A great majority of the diverticula in the duodenum are clinically silent. Others are associated with concurrent upper abdominal disease of the duodenum, the stomach, and the gallbladder. From the first report by Chomel in 1710, to 1910, the condition was discovered post-mortem, or unexpectedly at laparotomy, and was considered a rarity. Between 1910 and 1915 the literature was concerned chiefly with X-ray demonstrations of these diverticula. During this period and since, the incidence of their discovery has increased.

Duodenal diverticula are classified as congenital and acquired, and these subdivided into the true and false, the former showing all layers of the intestine and the latter lacking the muscular layer. Buschi adduced eight excellent reasons that these diverticula were all congenital. Pathological studies have, however, shown definitely an acquired variety, usually associated with other primary pathology, in the majority of cases with duodenal ulcer. A large variety of etiological factors are suggested—congenital defects such as weakness where vessels or ducts enter or pierce the wall; anomalous buds analogous to the fetal liver; and pancreatic buds; trauma; venous congestion; intra-luminary pressure; ulcer; inflammation; fatty degeneration of the muscularis; traction on the wall actuated by ptosis or by the mesenteric vessels.

Our experience makes necessary one further class of diverticulum, a pseudo-diverticulum produced by redundancy of the duodenum and which anatomically does not exist but which is an actual diverticular side-pocket which is by-passed by the stream of duodenal contents and shows prolonged retention.

The X-ray demonstration of these diverticula depends upon the appearance in the vicinity of the duodenum of an abnormal side-pocket which can be seen to fill and empty from the duodenum. Films may do this conclusively and I have been helped by stereoscopic films. Fluoroscopy is in most cases necessary because a large orifice may allow ready emptying, the horizontal portion of the stomach may obscure the picture, and redundant sacculations may be demonstrated as such by palpation. The majority of these diverticula are of the superior and descending portions and lie within the circle of the duodenum. A diverticulum to the right of the duodenum even in a high position is jejunal in origin. The roentgenological differentiation of congenital, acquired, and pseudo-diverticula cannot be conclusive. Association of ulcer will give strong presumption for the acquired type and for a diverticulitis. Prolonged retention by the diverticulum favors the possibility of diverticulitis. Prolonged retention did occur in the case of pseudo-diverticulum here presented.

A variety of factors enter into determining the clinical pathological activity of these diverticula. These factors may be grouped under two heads as inflammatory and mechanical. Diverticulitis is the rule in the acquired type which usually is of the first or proximal second portion and most frequently associated with ulcer. In all diverticula there may be a more ready entrance than egress due to the small size of the stoma and the position as above, below, or at the side of the cavity, and because of the positive inter-luminary pressure upon the stoma which, even in a true diverticulum having a muscularis, could hardly be equalled from within. Inflammation may occur as the sequence of independent upper alimentary conditions, such as an achlorhydria, duodenitis, gastritis, or cholecystitis.

There is no characteristic clinical picture of duodenal diverticulitis or of other complication in these abnormalities. The X-ray discovery of diverticula of the duodenum may have no other than anatomical interest. Other findings determine their clinical significance and chief among these is an exhaustive elimination of other independent upper abdominal pathology.

4. OBSERVATIONS ON THE CHEMICAL COMPOSITION OF THE CAPSULAR AND TUBULAR FLUIDS OF THE KIDNEY OF NECTURUS MACU-

LOSIS.—By Drs. H. L. WHITE AND F. O. SCHMITT.

Fluids were collected from the glomerular capsules and proximal convoluted tubules of *Necturus* by means of a micro-pipette-mercury system and were analyzed qualitatively for sugar, chlorides, and phosphates. Protein-free capsular fluids contained sugar at a time when the bladder urine was sugar-free. The chloride content of the capsular fluid was markedly higher than that of bladder urine. Within the accuracy of the method phosphates were absent in the capsular fluid. That the site of sugar reabsorption is the proximal convoluted tubule was proven by the fact that fluid collected from the lumen of the proximal convoluted tubule was sugar-free at a time when the capsular fluid was shown to contain sugar. The site of chloride reabsorption was determined indirectly. The chlorides are the chief osmotically active substances in the capsular fluid. Accordingly the site of chloride reabsorption should be marked by a definite drop in the osmotic pressure of the fluid. The fresh, washed red blood corpuscles of the dog, stained in methylene blue served as indicators of the osmotic pressure. When a glomerulo-tubule system is injected with such cells, the cells are not affected in the capsule but are almost instantly laked in the proximal convoluted tubule, proving that the site of chloride reabsorption is the proximal convoluted tubule.

BENTON COUNTY MEDICAL SOCIETY

At a recent meeting of Benton County Medical Society the following officers were elected for 1926: President, Samuel O. Stratton, Lincoln; vice president, Joseph M. Edwards, Cross Timbers; secretary treasurer, James A. Logan, Warsaw (re-elected).

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met at the Y. M. C. A. Rooms in Clinton, December 17, 1925.

The following members were present: Drs. W. E. Baggerly, F. M. Douglass, R. D. Haire, E. C. Peelor, S. A. Poague, G. S. Walker, S. W. Woltzen.

A resolution raising the dues to \$9.00 was adopted.

The financial report of the secretary-treasurer was read and approved.

The following officers were elected for the ensuing year: President, Dr. G. S. Walker, Clinton; vice president, Dr. W. E. Baggerly, La Due; secretary-treasurer, S. W. Woltzen, Clinton; delegate to State Association meeting, Dr. R. D. Haire, Clinton; alternate, Dr. W. E. Baggerly.

On motion the meeting adjourned.

E. C. PEELOR, M.D., Secretary.

MADISON COUNTY MEDICAL SOCIETY

The Madison County Medical Society met and re-elected the 1925 officers to hold over and act in their respective places during 1926. The officers are as follows: President, Dr. C. U. Davis, Fredericktown; vice president, Dr. E. E. Higdon, Fredericktown; secretary, Dr. W. Harry Barron, Fredericktown; treasurer, Dr. M. B. Barber, Fredericktown.

NODAWAY COUNTY MEDICAL SOCIETY

Nodaway County Medical Society has elected the following officers for 1926: President, Charles D. Humbert, Barnard; secretary, Horace S. Dowell, Maryville.

PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met at 6:30 p. m. February 15, at the Sedalia Country Club, with

twenty-one members in attendance. After an excellent dinner the meeting was called to order by the President, Dr. J. W. Boger, Sedalia.

Mr. Don Lamm, of Sedalia, explained a proposition by which a modern hospital can be secured for Sedalia through the generosity of Hon. J. H. Bothwell, Sedalia. Mr. Bothwell has offered to purchase \$50,000 worth of stock in a new hotel to be built in Sedalia, provided \$200,000 more is subscribed by the citizens of the county. At Mr. Bothwell's death this \$50,000 in stock plus \$100,000 in liberty bonds will be used to build a modern hospital.

Dr. M. P. Ravenel, Columbia, Professor of Bacteriology at the University of Missouri, then delivered an address on "Scarlet Fever Serums," which was followed by a very interesting discussion.

A. L. WALTER, M.D., Secretary.

RALLS COUNTY MEDICAL SOCIETY

Ralls County Medical Society has re-elected the following officers for 1926: President, H. B. Norton, Center, Mo.; secretary treasurer, T. J. Downing, New London, Mo.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society held the regular February meeting in the Library Building, at Moberly, Tuesday, February 9, with Dr. M. R. Noland in the chair.

Members present were: Drs. L. A. Bazan, L. Hunker, G. O. Cuppaidge, L. E. Huber, E. W. Shrader, M. E. Leusley, L. O. Nickell, C. H. Dixon, O. K. Megee, T. S. Fleming, R. D. Streeter, S. T. Ragan, M. R. Noland, F. L. McCormick, P. C. Davis, J. Maddox, and Dr. Lionberger, of St. Louis.

Dr. Cuppaidge made a motion which was second by Dr. Ragan that the secretary be instructed to send flowers accompanied by a letter of condolence, to Dr. D. A. Barnhart, Huntsville, who is very ill at this time.

It was left to a vote to decide whether we should continue with our present method of program or revert back to the old style. It was decided to continue as at present. This completed the business session.

The subject of Scarlet Fever was taken up as follows: Dr. Cuppaidge, Diagnosis; Dr. Leusley, Differential Diagnosis; Dr. Davis, Probable Complications; Dr. Fleming, Kidney Complications; Dr. Megee, Ear Complications; Dr. Dixon, Standpoint of Health Officer; Dr. Hunker, Vaccines and Prophylactic Measures.

Each gave a well prepared talk on the subject assigned and a general discussion followed with much interest shown.

After the discussion closed Dr. Lionberger, of Parke-Davis Laboratories, gave a 30-minute talk on "Immunization and Prophylaxis." All seemed to enjoy his talk which was very interesting.

The meeting adjourned to meet the second Tuesday in February at 8:00 p. m. in the Commercial Club Rooms of the Library Building at Moberly.

F. L. McCORMICK, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in regular session at the office of Dr. U. P. Haw, Benton, January 26.

On account of the weather and roads being bad only a small number were present yet we enjoyed a pleasant meeting and quite an enthusiastic professional program was presented.

A resolution changing the by-laws relative to dues was re-read and passed raising our dues to \$9.00 to comply with the State Association by-laws.

Attention of the society was called to the revised by-laws of the State Association, Chapter 12, Section 6, authorizing county societies to elect to permanent honor membership old and active members who are no longer in the fight and it was unanimously decided that two of our old timers should be placed and carried on our rolls as honor members. On ballot, Drs. T. R. Frazier, of Commerce, and P. M. Malcolm, of Sikeston, both old and retired members, were unanimously elected to honor membership. It seems the consensus of opinion that this honor is bestowed only upon the old members who in their active days were reliable and dependable and able representatives of what our society and profession really stand for.

Dr. Andrew J. Decker, who has recently located at Kelso, was present and his application for membership having been favorably passed on by the board of censors, he was welcomed into our society.

The next meeting of the society will be held at the Court House in Benton, in May and it is hoped that every member of Scott County will come out and take an active part in the upbuilding of the Association.

SYLVESTER DOGGETT, M.D., Secretary.

ST. CHARLES COUNTY MEDICAL SOCIETY

St. Charles County Medical Society has elected the following officers for 1926: President, Thomas L. Hardin, St. Charles (re-elected); vice president, B. Geret Gossow, St. Charles; secretary-treasurer, Leroy E. Belding, St. Charles (re-elected); censor for three years, B. Geret Gossow, St. Charles.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was held on Wednesday afternoon, February 10, in the Directors' Room of the Webster Groves Trust Company, Webster Groves. The following members were present: Drs. J. H. Armstrong, Marshall Baker, P. M. Brossard, L. W. Cape, H. N. Corley, C. P. Dyer, D. H. Hanson, C. C. Irick, Garnett Jones, F. P. Knabb, O. W. Koch, Horine Miles, W. F. O'Malley, O. N. Schudde, J. H. Sutter, J. A. Townsend, W. H. Townsend, E. E. Tremain, R. H. Trumpour. Minutes of the January meeting were read and approved.

The following appointments to committees were read and filed: Membership committee, Dr. Garnett Jones, Chairman; Dr. W. F. O'Malley, Dr. John H. Armstrong. Publicity committee, Dr. Otto W. Koch, Chairman; Dr. H. N. Corley, Dr. R. A. Walther. Legislation committee, Dr. A. W. Westrup, Chairman; Dr. R. B. Denny, Dr. John H. Sutter. Entertainment committee, Dr. Horine Miles, Chairman; Dr. Fred C. Kuhlmann, Dr. E. L. Fredericks. Necrology committee, Dr. W. H. Townsend, Chairman; Dr. Otto H. Schudde, Dr. F. P. Knabb.

Dr. C. P. Dyer reported for the special committee on plan of program for the year that it is impossible to compel a member to attend or to take part in the program. The committee recommended that the minimum program of the Michigan State Association be used by our program committee and the entertainment committee should busy itself arranging social events.

Dr. O. W. Koch reported that the special committee appointed, accompanied by fifteen or twenty other members of the society, had met with the County Court in regard to appointment of county health commissioner. At a later meeting of the court, about twenty organizations were represented

and urged the appointment of a member of the St. Louis County Medical Society as health commissioner and adoption of the full-time unit.

On motion resolutions were drawn up, recommending the full-time health unit and the appointment of a member of the St. Louis County Medical Society as county health commissioner, which resolutions are to be presented to the County Court.

The Secretary was instructed to order sixty copies of manual for the periodic examination of apparently health persons and distribute them among the members of the society.

Dr. J. H. Armstrong gave an autopsy report on the clinical case which was presented by him at the previous meeting.

The scientific program consisted of a timely and most interesting paper by Dr. Otto W. Koch, on "Earache and Its Complications." Great interest was shown by the members in the way they entered into the discussion of the paper. Many good points were enlarged upon.

C. P. DYER, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in the office of Dr. A. C. Ames, of Mountain Grove, Thursday afternoon, February 4, with the following members present: Drs. A. C. Ames, and F. B. Dailey, Mountain Grove; R. M. Rogers, Mansfield, and J. P. Cavalier, of Cabool, a visitor. Several members being sick were unable to attend.

The meeting was opened by Dr. Rogers, the vice president, and the minutes of the last meeting were read and approved. A financial statement showing \$53.07 in the treasury of which \$40.00 was on time deposit drawing interest, was presented. The secretary presented a bill for postage, etc., which amounted to \$3.54 for the year.

A paper on "Infancy and Old Age," was presented by Dr. Rogers. A number of valuable suggestions were brought out and some discussion by those present.

Dr. Ames discussed the subject of "Leukemia," and incidentally touched upon a number of similar diseases and conditions and the differences between them. He also reported a case of leukemia in a boy seven years of age and showed a microscopic specimen of the blood stained to show the enormously increased number of leucocytes.

The subject of holding winter meetings of our society and the difficulty encountered in the past, was discussed and it was the general opinion that some change should be made before another winter if possible so as to throw each meeting of the year one month later which would cut our meetings in January or February and still leave our usual number of meetings at more suitable seasons. The meeting then adjourned without setting a place for the next meeting which will be May 6 at the call of the president.

A. C. AMES, M.D., Secretary.

WOMEN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.
Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.

Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.

Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.

Treasurer, Mrs. C. T. Ryland, Lexington.

Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.

Chairman of Finance, Mrs. John C. Parrish, Vandalia.

Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.

Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

THE DALLAS MEETING

As the American Medical Association will hold in Dallas, Texas, its annual meeting for this year April 19-23, the Women's Auxiliary to the A. M. A. will be held at the same time and place. This brings our national meeting much nearer to us than last year, when it was at Atlantic City, and it is hoped many of our women will attend. Missouri is exceptionally well represented on the Executive Board of the Women's Auxiliary to the A. M. A. The regional Vice President for the section of eleven states of which Missouri is one, is Mrs. T. G. Orr, of Kansas City. The national Chairman of Education and Publicity is Mrs. George H. Hoxie, of Kansas City. Of the Advisory Committee of Three, Mrs. Willard Bartlett, of St. Louis, is a member. The President of the national organization is Mrs. Seale Harris, Birmingham, Alabama; the President-elect, Mrs. S. P. Gengenbach, Denver, Colorado.

JACKSON COUNTY AUXILIARY

The Women's Auxiliary to the Jackson County Medical Society, Mrs. A. W. McAlester, President, is holding regular meetings the first Friday of every month. The program committee, under the leadership of Mrs. M. A. Hanna, met early in the fall and planned a tentative series of programs for the monthly meetings which would accord with the expressed policy of the board to alternate social with educational programs. At the December meeting which was held in the beautiful home of Mrs. Richard L. Sutton, Mrs. Paul Cope, State Chairman of the Committee on Public Health of the Parent-Teachers' Association, and, we are proud to add, Chairman of the Committee on Education of the Jackson County Auxiliary, gave a talk on sex instruction, "How to Give My Child the Truth." Mrs. Cope's talk was scientifically, reverently and practically presented and made a deep impression. Though one of the worst storms of the season was raging, over fifty members were present and quite a few guests. Tea was served at the close of the program. The January meeting was merged in the meeting and reception of the Jackson County Medical Society on the opening of their new quarters in the Medical Arts Building and the dedication of the library. The February meeting will be a card party given by the Auxiliary that its members may have the opportunity of knowing each other better. We think we can pull together better if we play together occasionally. The March program will be again an educational one and Mrs. Hanna is arranging for an outside speaker but has not yet announced the name. Our board of directors, through its education committee, is cooperating with the state board of health in its health poster campaign for the grade schools. The board is awaiting a detailed report from the chairman of education to place subscription copies of *Hygeia* in various public reading and

recreation rooms and it made earnest efforts to induce the county court to continue its support of the Jackson County Health Unit. It is happy to report that these efforts were successful and that the Jackson County Health Unit will be continued.

THE AIMS OF PHYSICAL EDUCATION

Previously in this department and in communications direct to the County Women's Auxiliaries, the work and aims of the Bureau of Physical Education of the State Department of Education have been recommended for consideration and support. So thoroughly correlated are the work and aims of this Bureau with the aims of our State Board of Health that our Chairman of Education, Mrs. E. T. Gibson, desires to call your attention to the following passage in the Physical Education Bulletin No. 2 for 1925:

The aims of physical education may be briefly stated as follows:

1. The promotion of normal growth and organic development. This requires:
 - a. A program of health conservation.
 - b. Provision for the development of a fair degree of strength and endurance.
 - c. The securing of an erect and self-respecting carriage of the body.
 - d. The development of such nerve muscular control as is required for prompt and accurate response and for graceful and effective movements.
 - e. Ability to meet physical emergencies.

2. Development through activities of those fundamental traits which have a direct relation to society. This aim includes:

- a. The formation of such habits as, obedience, subordination, self-sacrifice, cooperation, friendliness, loyalty, patriotism.
 - b. Training in capacity for leadership.
 - c. The proper spirit toward victory and defeat.
 - d. A spirit of fair play (sportsmanship).
3. The development of those traits which have an indirect effect upon one's associates. These include: Self-confidence, self-control, mental and moral poise, alertness, resourcefulness, decisiveness, perseverance, courage, aggressiveness and initiative.
4. To create in youth an intelligent and healthful interest in physical activity that will carry over into adult life.

5. To form those habits in early life which tend toward the conservation of health, and to provide instruction in the science of health and the means by which it may be secured."

The above statement of "aims" should be its own recommendation not only to every auxiliary member but to every citizen in the state.

The following training rules issued in Dr. Curtis' most recent bulletin will appeal to every mother with children whether they be interested in athletics or not. Here they are:

Training Rules

1. Use no tobacco in any form.
2. Use no alcoholic liquors.
3. Attend your classes and athletic practices regularly.
4. Go to bed not later than 10:30 and sleep at least eight hours every night.
5. Have your meals at regular hours.
6. Eat slowly and chew your food thoroughly, with no eating between meals.
7. Avoid tea, coffee, candy, cake, most kinds of pie, pancakes, food fried in grease, or any other food that does not agree with you.

8. Eat some fruit and one or two green vegetables every day and drink plenty of water and milk.

9. Strive for cheerfulness, especially at meals, and avoid nervousness and worry.

10. Watch your appetite, weight, and sleep for evidence of overtraining.

Do not these rules indicate cooperation between our State Board of Health and the Bureau of Physical Education? And is not our endorsement and cooperation warranted?

BOOK REVIEWS

MASSAGE AND THERAPEUTIC EXERCISE. By Mary McMillan, Supervisor of Aids in Physiotherapy, Medical Corps, U. S. A., 1919-20. Second edition. Philadelphia and London. W. B. Saunders Company. 1925. Price \$2.50.

This little book is characterized by its sound teaching and happy absence of lengthy dissertation on theories and descriptions. Reading it leaves one with the impression that the material it contains has largely been acquired by practical experience rather than by copying. The matter of therapeutic exercises for the most part has been handled exceptionally well. For those who are in quest of therapeutic knowledge, especially along the lines of massage and exercise, and to a lesser extent of electro and hydrotherapy, this volume comments itself.

F. H. E.

DIFFERENTIAL DIAGNOSIS OF INTERNAL MEDICINE. By M. Matthes, M.D., Professor of Medicine and Director of the Medical Clinic, University of Konigsberg. Authorized translation of the fourth German edition with extensive additions. By I. W. Held, M.D., and M. H. Gross, M.D., New York City. Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St. 1925. Price \$12.00.

This is the translation of a textbook on differential diagnosis which has long been popular in Germany among undergraduate students and also among practitioners.

The translators have added copiously to the original which is about half the size of the American edition.

Matthes takes up diagnosis from the standpoint of a presenting symptom or syndrome. Thus samples of the chapter headings are, "The differential diagnosis of acute febrile infectious disease," "The differential diagnosis of the meningeal symptom-complex," "The differential of the peritonitis symptom-complex," "The differential diagnosis of headache." The book is illustrated with X-ray pictures, fever charts and other of the usual pictures found in books of this kind.

The authors believe that an advantage is to be had from the study of every method of diagnosis history, physical examination, laboratory and X-ray examinations, when they are grouped in this manner under the head of a symptom, in contradistinction to the usual method of studying a given diagnostic procedure in its application to every disease in which it is useful. Matthes' book is a good presentation of differential diagnosis on this plan. There is little in it that will be new to an experienced internist and it is not written in a style of any personal charm and hence is rather difficult to wade through. Placed in the hands of a student it would probably be very useful. In the one or two times since he has had it on his desk for review when the reviewer has had a puzzling case in which he needed

suggestions the book has not provided anything not thought of before. L. C.

CHEMICAL PATHOLOGY. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago. Fifth edition, revised and reset. Philadelphia and London. W. B. Saunders Company. 1925. Price \$8.50.

Dr. Wells' book is full of new material that is interesting to read, but of little practical value to the clinician. The student who writes papers will appreciate it. A pleasing feature is the direct manner in which attention is frequently called to the chapters on "Immunity" which are the best the reviewer has read. A. S. W.

POST-MORTEM APPEARANCES. By Joan M. Ross, M.B. B.S. (Lond.), Assistant Pathologist to St. Mary's Hospital. With Preface by E. H. Kettle, M.D., Professor of Pathology and Bacteriology, Welsh National School of Medicine, Cardiff. Oxford University Press, 35 W. 32d St., New York City. 1925. Price \$2.50.

This little book is a sort of an autopsy "pony." It is of value to the physician who does an occasional post-mortem examination. A. S. W.

THE ART OF MEDICAL TREATMENT. With reference both to the patient and to his friends. By Francis W. Palfrey, M.D., Visiting Physician, Boston City Hospital; Instructor in Medicine, Harvard University. W. B. Saunders Company. Philadelphia and London. 1925. Price \$4.50.

The author takes up various diseases in order and discusses them from the standpoint of treatment under the headings of: First thoughts, Placing (meaning whether the patient should be in the hospital, isolated, ambulatory or at rest), Diet, Remedial, Supportive, Palliative, Minor care, Nursing, Information (meaning what the patient should be told), Preventive. At the end of the book are some appendices on notes on drugs, diets and other descriptions of technic. The book presents a very interesting point of view on therapeutics, and is written clearly and takes a very catholic view of the principles of therapeutics. Fortified by books which give fundamental information such as the physiologic action of drugs it should be one of the most useful books in a busy practitioner's bookcase. L. C.

MODERN ASPECTS OF SYPHILIS. By M. J. Horgan, B.A., M.B., B.Ch., B.A.O., N.U.I., Late Resident Medical Officer, General Dispensary, Nottingham, London. Henry Frowde and Hodder & Stoughton, American address, Oxford University Press, 35 W. 32d St., New York City. 1925. Price \$1.75.

This book is an Oxford medical publication and is a small treatise dealing briefly with the pathology and treatment of syphilis and more definitely with the laboratory aids in the recognition of the disease.

The author stresses the value of nonspecific therapy, i. e., fever reactions following injections of foreign proteins (milk, tuberculin, etc.,) and artificial infections with tertian malaria.

In the chapter dealing with nonspecific therapy it is stated that many cases have been systematically treated with the combination of nonspecific and specific therapy, and more favorable results have been achieved than by any method previously employed.

The book summarizes the views of Prof. E. Finger and one of his co-workers in the finger clinic, Vienna, Dr. Kyrle, and as such its several chapters represent valuable contributions to the modern aspects of syphilis. W. W. G.

FIFTY YEARS OF PROGRESS IN THE TREATMENT OF GONORRHEA

In 1919, Victor G. Vecki, San Francisco (*Journal A. M. A.*, Nov. 21, 1925), recommended the use of intravenous injections of mercuric chlorid for the treatment of suppurating and infectious diseases, reporting that very good results can be obtained in chronic, suppurating conditions following gonococcus infection. With the possible reservation that mercuric chlorid is hard on the veins, Vecki says its usefulness is certainly superior to that of the other remedies; even injury to the veins may be avoided if proper precautions are used. Acute gonorrhea, however, is not being greatly influenced by any kind of intravenous medication thus far used. It has been asserted without successful contradiction that most cases of acute gonorrhea would be cured in short time if the patient could be persuaded that he is really sick and therefore should go to bed, live on a very strict diet of the best milk and bread only, keep the bowels empty, and drink some alkaline mineral water, or even some of the various bland decoctions. However, Vecki is convinced that real progress in the treatment of gonorrhea will not make its appearance until we abandon the idea that urology concerns the surgery of the kidneys, the ureters, the bladder and the senile prostate and ignores the genitalia proper, their contagious and functional pathologic conditions.

THE REPAIRED HEART

In the case reported by James L. Fisher, Youngstown, Ohio (*Journal A. M. A.*, Jan. 16, 1926), the heart, in which a large laceration had been sutured, was called on in three weeks to endure the added strain of a severe bronchopneumonia. The heart behaved satisfactorily in every respect, with the exception of the rate. Although rapid, the pulse was at all times regular in time and the beats equal in volume. At the time of maximum lung involvement, the circulation was only moderately embarrassed. Digitalis in the dosage given exhibited but little effect in slowing the heart. It is assumed that the vagus stimulation was not sufficient to overbalance the increased irritability of the myocardium. The presence of nonabsorbable suture material would perhaps tend to prolong the irritability.

REPORT ON ANTISTREPTOCOCCUS SERUM

Of twenty-five leading surgeons, gynecologists and obstetricians who were questioned by Emil Novak, Baltimore (*Journal A. M. A.*, Jan. 16, 1926), as to their opinion of antistreptococcus serum, sixteen considered it of no value, one said he knew nothing about it, and eight expressed the opinion that, while usually unsatisfactory, it might for certain indications be of real value. The chief of these was for a supposed protective or prophylactic action, while occasional good results are mentioned where the proper strain of streptococcus happens to be selected. Not a single one of the twenty-five questioned evinced any degree of enthusiasm for the serum.

THE INTERCONVERTIBILITY OF "ROUGH" AND "SMOOTH" BACTERIAL TYPES

Edwin O. Jordan, Chicago (*Journal A. M. A.*, Jan. 16, 1926), asserts that single-cell strains of paratyphoid bacilli of the R and S type can more or less regularly be made to yield cells of the opposite type by appropriate treatment. A nonvirulent strain can at will be converted into a virulent, and the virulent strain so produced possesses certain correlated characters, such as agglutinability and colony type formation, which distinguish it from the parent cell.

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ORIGINAL ARTICLES

SOME TYPES OF FRAUDULENT MEDICAL DIPLOMAS AND THE USES MADE OF THEM*

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INTRODUCTION

The paintings of the old masters, such as Michael Angelo, Rubens, Van Dyck and Velasquez, have been frequently copied and counterfeited but no one stoops to counterfeit the pot-boilers of the student artists of the Latin Quartier. Spurious counterfeits of the stable currency of the United States and of Great Britain continually appear but no one hears of counterfeit Russian roubles. The works of great writers of the past are frequently plagiarized but no one fears plagiarism of the complete novel in last week's Sunday supplement. There are paste diamonds, but it is not worth while to make imitation garnets. It is only the choice, the valuable, the desirable things that are counterfeited. Mediocrity is never complimented by spurious imitations.

With the great improvement in medical education in the twenty-five years just past, the genuine medical diploma has each year come to represent a longer period of study, a greater effort, a better training. It has, in terms of educational insignia, come to be in the public mind one of the most highly prized professional hall marks of our modern life. Following the general principle that the worth while things are subject to spurious imitations it was logical that fraudulent medical diplomas should make their appearance. When added to this came the very especial privileges in prescription writing accorded to medical licentiates by the Harrison Narcotic Act and the Volstead Law it is no wonder that a market for fraudulent medical diplomas has arisen and developed into a commercial enterprise. If it is one of our infant industries, it is a precocious infant.

This traffic has spread across the nation and

to foreign countries but the main factory branches of the consolidated operators have not been very many. Perhaps in a half dozen foci was there enough business to bring them into the main organization. This excludes the frequent appearance of small independent operators whose enterprises are shortlived.

In one of the states in which were two of the principal foci of these activities it has been my privilege to work with the public authorities in the study of the methods and results of the short-cut into the medical profession through fraudulent diplomas.

THE ESSENTIALS OF A NON-FRAUDULENT DIPLOMA

It seems desirable to attempt to define a fraudulent medical diploma. I shall approach this by the contrastive method of describing the various minimum essentials which a nonfraudulent medical diploma of the past decade represents. For earlier decades the characteristics would not be exactly the same.

The status of medical education in the United States for the years 1915-1925 demand that a diploma establishing the ability to practice medicine on the minimum permissible standard of efficiency should give assurance of the following accomplishments by the holder of that diploma:

1. First of all he must have had a preliminary education represented by attendance in a reputable secondary school for four years of nine school months each and an accomplishment in the subjects of these years represented by a passing grade in each, or the full and real equivalent of education. Since education is a cumulative process, lapse of time is elemental to education. The tenet that educational equivalent is established by answering correctly, within the space of a few days, a considerable number of questions on information in a variety of subjects is unsound. Such may, through bad official judgment, be accepted as a substitute but it could never be an equivalent. Examinations in their usual form do not establish an education since they are only one, and that a minor, factor in education. They only establish coincident knowledge, often transitory, of series of facts that may have been secured

*Read before Annual Meeting of the Federation of State Medical Boards of the United States at Chicago, February 17, 1926.

either in the process of education or through other processes, sometimes irregular. As a preparation for the medical course, education, which includes training as well as information, is far more pertinent than is mere knowledge.

2. A second essential accomplishment is an attendance, punctual and complete, on instruction in a suitably equipped and suitably conducted medical school, for four school years of at least thirty-two weeks each, and the passing of all courses of the curriculum. It is essential that the course shall have been graded. Repetitive and telescoped years of instruction, whatever may have been the opinion concerning them fifty, forty, thirty, or even twenty years ago, are, in terms of medical education standards of 1915-1925, but pretensions of the real medical curriculum.

3. A minimum suitable equipment necessarily demands facilities for laboratory teaching, and the use of them, in these subjects in which laboratory work is a usual feature, and it also demands clinical facilities for concrete objective teaching of the various phases of clinical medicine, surgery and obstetrics in the presence of patients, both walking and hospitalized.

4. A minimum of suitable conduct of a school demands, strict enforcement of the minimum educational entrance requirement, a punctual conduct of instruction, a requirement of at least eighty per cent. of attendance by students, properly proctored examinations that are real rather than perfunctory, and the denial of progress to that ever present group of less capable students who cannot, or will not, profit by the instruction; which results in the elimination of the unfit.

Unless every diploma of a medical school represents at least the fulfillment of the foregoing conditions that diploma is educationally a spurious counterfeit of the minimum standard of medical education of 1915-1925 and such a diploma is therefore potentially fraudulent, the degree of fraudulency depending upon how great a departure is made downward from the absolute minimum set forth in the preceding paragraphs.

I have so far made no reference to efficiency of teachers. While an efficient corps of teachers is the primary requisite of a real educational institution this factor is less capable of quantitative measurement than are the foregoing specifications, and however gifted and capable may be the corps of teachers, the lack of any of the specifications above given would make it impossible to reach the minimum medical educational standard of 1915-1925. Even an Osler would be of little avail if there were no dispensary or hospital patients at hand for teaching clinical medicine. The foregoing

specifications are parallel to the very lowest conditions that would have permitted a B classification of a medical school at any time in the past twenty years.

There are some who will decline to accept this definition of a fraudulent medical diploma and will prefer to restrict the term fraudulent to these cases where there has been concealed deceit, known by the participants to involve dishonesty and usually including a venal transaction.

THE POTENTIAL AND ACTUAL FRAUDULENCY OF DIPLOMAS OF CERTAIN MISSOURI MEDICAL SCHOOLS

In the study of medical education in Missouri I have secured convincing evidence as to short-cut methods in medical education in that state, together with collateral evidence of conditions in some other states, and have also heard a mass of partially corroborated rumors, which cannot be considered as evidence, but which yet fit into the picture.

In a thorough and conservative investigation of all of the medical schools in Missouri made by members of the State Board of Health it was unanimously agreed that the medical schools of Missouri University, of St. Louis University and of Washington University are so equipped, manned and conducted as to leave no question of their efficiency in giving adequate medical training. No further reference will be made to these, as these three schools are the only medical schools in Missouri which are now considered reputable by the State Board of Health.

An examination of the conditions in the Kansas City College of Medicine & Surgery and the St. Louis College of Physicians and Surgeons as to their shortcomings from these minimum specifications to avoid fraudulency, leads to the certain observations and conclusions:

1. The preliminary education of a considerable number of the graduates of the St. Louis College of Physicians and Surgeons was investigated in hearings before the State Board of Health and private inquiry was made of many more. As samples of the findings one licentiate, who was admitted to examinations on a certificate of having passed an examination before a central Illinois county school commissioner purporting to establish the equivalence of a high school education, himself testified under oath that he had never been inside the state of Illinois. Another graduate, not a licentiate, testified under oath that he presented as evidence of preliminary education a certificate of having passed examinations at Indianapolis before the state superintendent of education of Indiana but that the only time he had

ever been in the state of Indiana was to go across the northern part of the state on a sleeping-car three years subsequent to the date of that certificate. At the date of that certificate he was a laborer in Cleveland and unable to speak English. Sworn testimony on numerous cases showed that certificates of equivalence by examination were purchased without the examiner ever having seen the candidate purported to have been examined. Of the many cases investigated a large proportion showed that the credentials of preliminary education were spurious and there can be no doubt that the officers of the medical school were cognizant of that fact. Some credentials were genuine and in rare instances college graduates received diplomas from the St. Louis College of Physicians and Surgeons and from the Kansas City College of Medicine and Surgery, but anything like strict enforcement of minimum preliminary education was absent in both schools. Under the specifications above recited, this fact alone makes actually fraudulent a considerable proportion, and potentially fraudulent, all of the diplomas issued by those two schools in the past decade.

2. Requirement of attendance on the part of students in these two schools was gratuitous and no evidence of any sustained requirement of attendance could be secured. No reliable system of recording attendance was developed. The statements of many former students indicate extreme laxity of attendance, not only of students, but also of teachers. One graduate testified under oath that he entered as a senior in December and left in March and was graduated the following May. This was his first experience in a medical school actually in operation. Men who cooperated in the traffic testified it was not uncommon for students, after matriculating, to go home for the greater part of the year returning only for commencement. The payment of fees seems to have been considered an acceptable substitute for attendance. The statements of officers, graduates and students warrant the inference that the attendance of eighty per cent. of the school exercises in any year, while possibly occurring for an isolated individual, was not an enforced requirement and was more unusual than usual. While a few men were registered in each of four succeeding years, some of these, on their own testimony, were concurrently engaged in another vocation which precluded complete attendance in each year. Every diploma of the past ten years issued by these two schools is at least very questionable as to representing full attendance and many were certainly not earned on this basis.

The four-year graded curriculum certainly was not enforced in either of the above schools

during the entire period of 1915-1925 nor did it exist in any year of the ten in either school. For a time the St. Louis College of Physicians and Surgeons printed but two schedule cards, one for Freshman-Sophomores, the other for Junior-Seniors. Later it printed four schedules concealing the telescoping by calling the same instruction under different names, e. g., in one recent year Pharmacy for Freshmen, Pharmacology for Sophomores, *Materia Medica* for Juniors and Therapeutics for Seniors were scheduled at the same hour on the same day of the week. At first glance this would be accepted to be evidence of four separate courses with classes running at the same time in different lecture rooms. As a matter of fact, as stated by the teacher in charge, the four classes were assembled together and received a single lecture for the four subjects.

A method of telescoping four years into two which I first discovered in an eclectic medical school in Nebraska about 1910 was partially in use. Under this method on the time card schedule alternate hours were occupied and free. In such case the occupied hours for Freshmen were even hours, those for Sophomores were odd hours. An individual could thus concurrently attend all classes of both Freshman and Sophomore years. The same plan held for Junior-Senior work.

In the Kansas City College of Medicine and Surgery, where the Junior and Senior curricula were admittedly identical, there was the very accommodating rule that if a student passed examinations at the end of the junior year he was not required to take any examinations in or at the end of the Senior year. Inquiry elicited no recollection of any man ever having failed to pass the junior examinations. This may be explained by the by-law of the trustees which authorized the owner of the school, who was not a member of the faculty, to give examinations in any subject to any student who objected to being examined by his professor. Since this owner could not recollect ever having failed a man and said he did not know what textbook was used in as outstanding a subject as the therapeutics of his own particular school of medicine, it hardly seems necessary to suggest any inferences as to the educational efficiency of the so-called four-year curriculum of that school.

By admission of principals in both schools the junior and senior years were practically identical and at times the freshman and sophomore years were identical, hence at no time was either school more than a three-year school and for a considerable, if not for the greater part of the decade, each of these two schools was, in the terms of presentday professional education, only a two-year school, and it was easily pos-

sible for a very moderately capable student in a period of two school years to take all the different courses required for the degree in either school. While a few students were registered and listed in each of four successive years, some of these were carrying on another vocation during these years, and there is nothing convincing to show that any single individual attended upon a full schedule for four years in either school in the ten years under discussion.

3. In judging these schools by the criterion of equipment and facilities I shall, for want of time, pass over gross deficiencies in laboratory equipment and refer only to clinical facilities. The owner, dean and manager of the Kansas City College of Medicine and Surgery, voluntarily stated that, as far as he knew, no graduate of his school had ever seen a sick patient, inasmuch as dispensary or hospital experience was optional and the student must himself seek out his clinical material, since the school had no facilities afforded by a hospital in operation.

In the hearing concerning the St. Louis College of Physicians and Surgeons the superintendents of certain hospitals, which the school catalogue listed as clinical facilities, testified under oath that no contractual relations existed, and that in the hospital listed as being the chief seat of clinical teaching only on one day in the past six years had a group of students received instruction in that hospital.

Therefore as regards preliminary education, as regards a four-year graded curriculum, and as regards clinical facilities, to go no further, the accomplishments in these two schools for 1915-1925 were enough far below the level of the minimum standard for a genuine diploma to make every diploma issued by them in that period potentially fraudulent according to the standards which I have laid down as a basis for this discussion, i. e., based on the very lowest minimum acceptable standard of medical education in the United States for the decade 1915-1925.

In addition an examination of the records of the trustees of each school for this period showed that only in one year in one school were the degrees voted by the trustees. In a period of forty-six years the records of the St. Louis College of Physicians and Surgeons show but eleven meetings of the trustees. It may, therefore, well be argued that these degrees are nearly all illegal.

ADVANCED STANDING INVOLVING FRAUDULENCY

I have so far made no reference to any students except to those who professed to have secured all their medical education in a single school. However the officers of one of those schools estimated that ninety per cent. of its graduates entered from some other medical school. This brings us to consideration of ad-

vanced standing students. These fall into several groups:

1. The student who had actually spent one, two or three years in another school and flunked out. Such were frequently admitted and received credit for as many years of the medical course as they had been in attendance, or even registered, in another medical school with no inquiry as to whether or not courses had been passed. This courtesy also extended to attendance in college of arts and science and, if a man had been in a college of arts and science and taken, but not necessarily passed, chemistry, biology, physics, etc., he was eligible to at least one year of advanced standing in the medical school.

One man was given three years credit for ten months registration in a low grade Chicago medical school, but with no evidence as to passing courses or even of attending. He was admitted to the senior class and eight months later was graduated in 1918. Two months after graduation he was licensed in Kentucky, and according to the latest medical directory is in practice in that state. Others came with many conditions and took a perfunctory examination. A sample case is of a man who had twice flunked the junior year in a Maryland medical school and had been dismissed. He came with failures in pathology, medicine, surgery and obstetrics. In a fifteen-minute oral examination, by the owner of the school, all these failures were removed and the applicant admitted to the senior class. Eight months later he was graduated and a year after graduation he was made a professor and head of one of the major departments in the school.

The next group of advanced standing men were those having credentials, usually from a school no longer in existence, purporting to have been earned several years before they were presented. These credentials usually covered three years and on them admission to the senior class was granted. The testimony of partners and participants in this educational cesspool is that these credentials were frequently, if not usually, fraudulent and available at a definite market price. A considerable number of such cases have been checked back to the printed lists of students in the catalogue of the school, for the years in which the credits purported to have been earned, and in most cases the name does not appear among those listed as students in the years concerned.

The sale of these manufactured medical credentials became too profitable to be lost. In later years, participants state, the school manufactured them for their own use, i. e., for so many dollars would be issued to a student who had never attended any medical school, credentials purporting to show one, two, or three

years attendance in the local medical school and he would be admitted to an advanced class. Various collateral evidence leads me to believe these statements as to home manufacture of credentials.

Those credentials were often dated back six, eight or even ten years. Checking against published lists of students for years concerned often failed to disclose the individual as a student in the school when he was purported to have earned the credits.

I hope secretaries of state boards will be warned that whenever a student's medical school history shows a long interval between any of the years of study it is ground for immediate suspicion and careful investigation.

In addition there was given liberal credit for attendance in veterinary and dental schools. In one case a man was admitted to the senior class of the medical school on the basis of fifteen years practice as a veterinary surgeon and graduated eight months later.

OTHER TYPES OF DIPLOMAS

Another type of diploma was that of the so-called postgraduate students of the St. Louis College of Physicians and Surgeons. Apparently any holder of a medical diploma could be admitted to the senior class as a postgraduate student. These postgraduate students received liberal concessions as to attendance and examination and were practically certain of receiving a diploma marked postgraduate at the next commencement. A postgraduate diploma is usually a very impressive instrument to the secretary of a licensing board and might be expected to secure leniency in licensing. However, since any medical diploma would admit to the senior year as a postgraduate student and since Pacific Medical School diplomas were on the market at a price as low as \$150, one could really get a postgraduate diploma from the St. Louis College of Physicians and Surgeons with less effort and at a lower cost than a regular diploma. There are numerous instances of admission to the senior class of holders of Pacific Medical College diplomas and some of these given credit for work in the Pacific Medical College at dates one or two years before that school was organized in 1911. Admission to the senior class might be very late in the year, even the day before commencement. Let me cite a concrete example. In 1921 the commencement of the St. Louis College of Physicians and Surgeons was on May 18. On May 13 or 14 two osteopaths left Los Angeles. They arrived in St. Louis on May 17. On May 18 they were graduated and received diplomas. On May 19 they started back to California. One of them now has this diploma adorning his office in Los Angeles and on the basis of

that diploma was commissioned as a captain in the National Guard of that state. The foregoing is from information secured by California authorities. My own information is that these men were granted postgraduate or *ad eundem* diplomas based on diplomas of the Pacific Medical College dated 1917. Incidentally the accepted preliminary education of one of these men was high school graduation in the same year of 1917.

A participant in the diploma selling testified under oath that frequently men come in from other cities on a morning train and left the same night with a diploma, though sometimes, due to the fact that the stock of diplomas was exhausted, there was delay until a new supply could be printed. The haste is borne out by the fact that in some cases the records bear only the surname of the recipient of the diploma, apparently there not being time available to get his full name or even his initials.

Not all these postgraduate degrees were based on medical degrees. Instances where osteopathic, chiropractic and veterinary degrees were accepted have come to light.

The next type of diploma is the Honorary Diploma of the Kansas City College of Medicine and Surgery. According to statements of the owner of that school this was available, without attendance, for \$200 as soon as a man had received another medical diploma, often the next day, and with no inquiry as to how he got that diploma. Some were issued to men who had no previous diploma. A holder of a diploma of the Pacific Medical College at \$150 could, and several did, for an additional \$200, become an honorary graduate of the Kansas City College of Medicine and Surgery and an Eclectic physician. Thus for \$350 he was graduated from two medical colleges in two different schools of medicine, in one case with the impressive prefix of Honorary, and all without inconvenience as to attending upon any instruction. There was an added advantage to this honorary diploma in that some of them, at least, were negotiable. In the hearing at Kansas City a witness under oath testified that he secured a diploma of the Kansas City College of Medicine and Surgery duly signed, sealed and dated, but with the name blank, and was told to himself attend to inserting the word honorary and his name. Of course there can be no reliable record of the final holders of such negotiable diplomas.

There is yet another type of medical diploma produced in Missouri which may be designated as a parasitic twin. It has unique characteristics all its own. In 1917 an osteopathic school amended its charter and in 1918 was transmuted into the Kansas City University of Physicians and Surgeons. This institution is

chartered, not under the act for educational institutions not to be conducted for profit, but under the act covering the incorporation of manufacturing concerns run for profit. It runs concurrently an osteopathic and a so-called medical curriculum, the distinctively medical feature resting chiefly in one man who lectures on Eclectic therapeutics. At the end of this mongrel course degrees and diplomas in both osteopathy and medicine are granted. As a reward for attending one or two extra lectures per week for a school year an additional trading stamp is given in the form of a diploma conferring the degree of Doctor of Public Health.

This reminds one of that method of salesmanship used by certain notion stores where two of an article are sold for the price of one plus one cent. One feels that the one cent more nearly than the price of one expresses the true value of each.

This concurrent duplication of cult and medical curricula is also simulated in a school in a state on the Atlantic seaboard. Both the Missouri school and the Massachusetts school, in their medical aspirations, claim to be Eclectic. The Kansas City College of Medicine and Surgery claims to be Eclectic and the St. Louis College of Physicians and Surgeons, by giving a few lecturers in Eclectic therapeutics, laid claim to being both a regular and an eclectic organization. Just why the eclectics should be so imposed upon probably has relation to multiple licensing boards, for the two major groups of licentiates of this group of schools were in Connecticut and Arkansas and both of those states had eclectic boards under the multiple board system.

The newest type of diploma is the duplicate diploma. The checking against all available sources of information of a short list of duplicate diplomas issued in 1925, disclosed that some of these men were not in the published list of graduates in the year stated in the duplicate diploma. Such a duplicate purports to be duplicate of a diploma issued a considerable number of years previous. It is a clever scheme because the ordinary licensing official would not question a diploma marked as being a duplicate of a diploma purporting to have been issued when the school was reputable, nearly as quickly as he would a confessedly original diploma of the same date but showing unmistakable evidences of newness.

These are some of the types of diplomas produced in Missouri. There appears no need of discussing the proficiency which they represent.

THE NUMBER OF QUESTIONABLE DIPLOMAS ISSUED IN THE LAST DECADE

A very proper inquiry is as to how many of

these diplomas have been issued. I do not believe it is possible to determine with any high degree of accuracy. While we have, as to the two schools in Missouri under discussion, a pretty accurate idea as to how many were graduated at each successive commencement, the total of those graduated at the several commencements is by no means the total of all graduates. Interval individual commencements were apparently common because there is specific evidence of diplomas issued and in existence to men who were not in the class when it graduated. A report of the number of graduates of the St. Louis College of Physicians and Surgeons in each year was secured within a short time after each commencement either from the officers of the school or from other sources fully as reliable. These figures were published in the educational numbers of the *Journal of the American Medical Association*. The sum of these figures for the years 1917 to 1925 inclusive indicates 274 graduates. I have the names of 449 holders of the diplomas of this school in those years and this list is constantly increasing. As examples; in April, 1918, the officers of the school reported to the state board the names of 52 students as its complete enrollment. Of these 35 were seniors. Immediately after the 1918 commencement in May there appeared to have been 40 graduates. Now I have the names of 49 holders of 1918 diplomas of that school. In July, 1919, the owner of the school sent a list of all students in attendance during 1918-19 to the American Medical Association. It contained 86 names of which 24 were seniors. I now have the names of 32 holders of diplomas dated 1919. There appeared in July, 1922, to have been a total of 36 graduates in that year. I have the names of 94 holders of 1922 diplomas. In June, 1923, there were reported 38 graduates of 1923. I now have names of 81 holders of 1923 diplomas. The owner of that school testified under oath that during the period 1917-1925 the number of students in all classes in the school in each year was from 40 to 60, and in no year over 60, of whom approximately one-half, i. e., 20 to 30 were seniors. I have the names of more than 30 holders of diplomas of each of the years from 1918 to 1923 inclusive.

This predating of diplomas covered in some cases an interval of two or three years and probably even longer. It is impossible to say how many of these predated diplomas are in existence, nor for how long they will still continue to be issued.

This information cannot be gained from the school records for these are incomplete, both from non-entry and also from subsequent mutilation. The number of the holders of these

diplomas who have applied to licensing boards for examination gives some check, but by no means complete, for a good many desired these diplomas without any idea of trying to get a license to practice medicine.

A check of reports by the deans to the state board of health, of class pictures, of catalogue lists, and of data collected from applications to the state boards gives a probable total of recipients of diplomas of the St. Louis College of Physicians and Surgeons from 1916—when the school resumed operation after an interval of a year's suspension—up to 1925 of about 450. Data from the catalogue lists of the Kansas City College of Medicine and Surgery, supplemented by checking the applications to medical licensing boards in the United States, indicates that school granted from 1915-1925 at least 250 regular diplomas and at least 120 honorary diplomas. This gives a record of 820 diplomas of these two schools known up to date. Thirty-two individuals hold the diplomas of both schools, so that the data at present in hand shows nearly 800 known individuals who received the diploma of one or the other or both of these schools in the past decade. We have found many holders of diplomas of each of these schools of which the catalogue lists and reports give no hint. As to how many more of these exist there is no available record. From these and other sources of information I believe the total number of diplomas issued domestically by these two schools since 1915 is not under 900. I will not venture a conjecture as to how many have been issued beyond this figure. This takes no account of recipients not residents of the United States. There are certainly some of these. Of these diplomas it is my opinion that not a single one represents the lowest minimum acceptable standards of medical education of the decade of 1915-1925 as I have laid them down. Therefore, judged by those standards every one is potentially fraudulent. Of these a large number were actually fraudulent in that they did not represent even the avowed published current usage in the schools concerned but were based on spurious elements in the education known, at least, to the recipients. These figures do not include any diplomas issued by the Kansas City University of Physicians and Surgeons, information concerning which yet remains to be assembled.

Of the issuance of diplomas by schools outside of Missouri I have no direct knowledge. Agents and participants in this diploma mill activity have stated that the Pacific Medical College alone issued from three to four thousand diplomas, chiefly to osteopaths, chiropractors and members of minor cults. Whether this estimate is guesswork, exaggeration and

braggadocio or really an attempt at an approximate estimate is a matter of opinion, which in the absence of accurate data, is the privilege of anyone to accept or reject. The secretary of the California Board of Medical Examiners has informed me that, from data at present available, the number of Pacific Medical College diplomas issued appears to be less than one thousand.

We all know that there are several other medical schools in operation that, as far as educational facilities is concerned, are nearly or quite as deficient as these two Missouri schools. If any argument as to potential fraudulency is sound, it applies as well to the diplomas of these other schools. Yet their product continues to be admitted to examination in a certain few states and occasionally licensed. It seems to me a refusal to admit to examinations graduates of any of these schools, which would probably invite a mandamus proceeding, would give the courts in each of those states an opportunity to decide whether the public health or technical points of law are paramount.

THE USES OF NONDESCRIPT MEDICAL DIPLOMAS

A good many who secured these diplomas did so with no idea of trying to get a license to practice medicine. These individuals are osteopaths, chiropractors and adherents of minor cults who want these diplomas for several reasons. One reason is that in many states the holder of such a diploma, although not a licensee in medicine, yet has the legal right to use on his stationery, literature, advertisements and office signs, the initials of the medical degree or of any other degree which he holds. A second reason is that such a diploma hanging on the office wall of a cultist much impresses the type of people who patronize him and permits the cultist to claim knowledge of both medicine and the cult and to claim that, believing medicine to be inferior, he practices the cult by preference. A third reason is, as some of the cultists have told me, that the cultist who has such a medical diploma can get higher fees than his competitor who has not.

There seem to have been a considerable number of drug store proprietors who secured one of these diplomas. There is yet another and non-professional use of these diplomas and that is for social prestige. Especially in communities of foreign origin the title of Doctor gives a social standing not easily otherwise acquired and places its holder among the intellectuals in the consideration of his fellows. There are constantly in some dental schools students who have no intention of practice but seek only the title of Doctor. It is probable that some individuals have secured the short-cut medical diplomas for this purpose.

THE NUMBER OF HOLDERS OF NONDESCRIPT MISSOURI DIPLOMAS WHO HAVE BEEN LICENSED

The issuance of medical diplomas based on inefficient instruction and facilities or the issuance of actually fraudulent or spurious diplomas is incident to many tragedies when their holders attempt to treat the sick and is evidence of the deficiency of educational control by the public statutes. Whether these diplomas are used as a harmless social ornament or to deceive the people as to the real status of licensed cultists, or used as a cloak by irregular practitioners, such as prescribing druggists, or used by unlicensed and illegal practitioners, they are in every case a menace, for in every case they pretend to evidence an adequate medical training, and so are deceptive. The more serious condition appears when we find that some of the holders of these unearned diplomas have secured a license and thereby become legal practitioners of medicine.

I have endeavored to ascertain how many of those who were graduated by these two Missouri schools in the past decade have been licensed in medicine. I have accumulated from a variety of sources lists of the graduates of these two schools. These lists are confessedly incomplete, since one of the chief sources in compiling them has been the record of applications for medical license, and as already stated, many of these graduates had in view other purposes than medical license when they secured their diplomas.

These lists have been checked against the 1925 A. M. A. Directory of physicians. This directory is not complete and some graduates of these schools that are known to be licensed do not appear in that directory and, moreover, in the directory the data is not complete regarding all the names, so that some men who may be graduates of one of these schools cannot be surely identified in the directory. Therefore the following tabulation of identified names appearing in the 1925 A. M. A. Directory indicates an approximation only and is probably considerably short of the actual number who are licensed.

TABLE 1.

Licenses Issued to Graduates of Kansas City College of Medicine and Surgery—Classes of 1916-24 incl.		
	Regular Degree	Honorary Degree
Total Number of Graduates.....	230	120
Not identified as appearing 1925 A. M. A. Directory	95	50
Total number appearing in 1925 A. M. A. Directory	135	70
Licensed in Arkansas	53	14
Licensed in Connecticut	40	36
Licensed in Kansas	12	13
Licensed in Missouri	12	5
Licensed in Texas	10	2
Licensed in Oklahoma	6	0
Licensed in Colorado	4	0
Licensed in Nevada	2	0

Licensed in Tennessee	2	1
Licensed in California	1	1
Licensed in Georgia	1	0
Licensed in Wyoming	1	0
Licensed in Kentucky	0	1
In U. S. Army	1	0
In U. S. Navy	1	0
	146	74
Licensed in two states.....	11	4
Net total	135	70
		135
Grand total		205

From state board records we know that the above figures are short in Connecticut. In Missouri the five listed under honorary degrees were all licensed on the basis of the diploma of the St. Louis College of Physicians and Surgeons, but there are four additional regular graduates making a total of sixteen. These sixteen were all licensed within a period of nine months (October, 1922-June, 1923) following the license in October of one graduate whose name has been much in the public prints in recent months. A summary of this search of the directory shows that of 350 recipients of diplomas of the Kansas City College of Medicine and Surgery from 1916-1924, inclusive, 220 licenses have been granted to 205 individuals in thirteen states. The states in which more than ten licenses have been granted are Arkansas 67, Connecticut 76, Kansas 25, Missouri 17 and Texas 12. The holders of these diplomas are also represented in the U. S. Army and in the U. S. Navy. A check against the figures in the State Board numbers of the *Journal of the American Medical Association* shows reported licensing of 176 graduates of this school from 1916-1924 inclusive, the figures for 1925 not being yet available. This number of 176 falls short of the 205 accumulated from the A. M. A. Directory but is in part accounted for by the fact that a few of these holders of honorary degrees were licensed on other credentials previous to the date of their honorary degrees.

TABLE 2.

Licenses Issued to Graduates of St. Louis College of Physicians and Surgeons, Classes of 1917-24	
Total Number of Graduates	428
Not identified as appearing in 1925 A. M. A. Directory...	244
Total number appearing in 1925 A. M. A. Directory...	184
Licensed in Missouri	67
Licensed in Connecticut	45
Licensed in Massachusetts	10
Licensed in Arkansas	9
Licensed in Colorado	7
Licensed in Oklahoma	7
Licensed in Kentucky	6
Licensed in Tennessee	6
Licensed in California	4
Licensed in Kansas	3
Licensed in Wyoming	3
Licensed in Illinois	2
Licensed in Washington	2
Licensed in West Virginia	2
Licensed in Arizona	1
Licensed in District of Columbia.....	1
Licensed in Florida	1
Licensed in Georgia	1
Licensed in Michigan	1
Licensed in Nebraska	1
Licensed in Oregon	1

Licensed in Texas	1
Licensed in Utah	1
Licensed in Wisconsin	1
In U. S. Navy	1
	184
Licensed in two states	13
	171

A summary of the search of the directory, supplemented by figures direct from the state authorities in Connecticut and Missouri shows that of 428 recipients of the diplomas of the St. Louis College of Physicians and Surgeons from 1917 to 1924 inclusive, 184 licenses have been issued to 171 individuals in twenty-four states. The states in which more than ten licenses have been issued are Missouri 67, Connecticut 45, Massachusetts 10. Graduates of this school in this period are also in the U. S. Navy and the U. S. Public Health Service.

Combining the two tables we find that to a total of 778 holders of diplomas issued from 1916 to 1924 to graduates of one or the other school, both of which were grossly deficient in facilities and conduct throughout the period, 404 licenses have been issued in twenty-four different states, and also some of their holders are in the Army, the Navy and the Public Health Service.

A check against the figures in the State Board numbers of the *Journal of the American Medical Association* is not possible for the St. Louis College of Physicians and Surgeons, since in the five year tables where this data is located it is not possible to separate in the early years the graduates before and after 1916.

COMPARATIVE CHANCE OF LICENSE IN DIFFERENT STATES

I have next tried to get some data as to the facility with which various boards granted licenses to graduates during the past ten years of these two schools, as measured by the percentage licensed of all examined. This data is compiled from the State Board numbers of the *Journal of the American Medical Association*.

This information is not in all cases complete, e. g., combining the report from Missouri for 1922-23 shows fourteen graduates of the Kansas City College of Medicine and Surgery examined with nine licensed. As already stated I have the names and license numbers of sixteen licentiates of that school in that state in those two years.

TABLE 3.

Number of Graduates of the Kansas City College of Medicine and Surgery Examined and Percentage Licensed Classes 1916-24 inclusive (Years 1916-24)		
State	Number Examined	Percentage Licensed
U. S. Territories	1	100
Nevada	2	100
Connecticut	30	93.3
Arkansas	203	81.7

Oklahoma	5	80.0
Texas	3	66.6
Illinois	2	50.0
Missouri	18	50.0
Wyoming	2	50.0
Colorado	13	30.8
District of Columbia	1	0.0
Total	282	62.4

TABLE 4.

Number of Graduates of St. Louis College of Physicians and Surgeons Examined and Percentage Licensed Classes 1917-24 (Years 1920-24)		
State	Number Examined	Percentage Licensed
Kentucky	3	100
Nebraska	1	100
Nevada	2	100
Connecticut	45	91.1
Oklahoma	5	80.0
Wyoming	4	75.0
West Virginia	3	66.6
Oregon	2	50.0
Wisconsin	2	50.0
Missouri	72	48.6
Massachusetts	47	34.0
Utah	3	33.3
Colorado	56	25.0
Arizona	6	16.6
Illinois	26	15.4
California	2	0.0
District of Columbia	7	0.0
U. S. Territories	1	0.0
Total	284	46.9

Compilation of the data shows that in the case of the Kansas City College of Medicine and Surgery the chance of getting a license after securing entrance to the examinations in years 1916-1924 inclusive ranged from 0 per cent. in the District of Columbia to 100 per cent. chance in Nevada, with an average for all states of 62.4 per cent. For graduates of the St. Louis College of Physicians and Surgeons for years 1920-24 inclusive the range was from 0 per cent. in California and the District of Columbia to 100 per cent. in Nevada, Nebraska and Kentucky, with an average of 46.9 per cent.

Combining the two schools the average chance of getting a license after securing entrance to the examinations was 53.9 per cent. In Missouri this chance was 49.3 per cent. We thus see that the graduates of these schools, once allowed to enter the examination had better than an even chance of getting a license. In 1916 this chance was 100 per cent. but in 1924 it was but 23.1 per cent., which indicates either that the character of licensing examinations was improving or that the schools were getting worse. Probably both conditions were matters of fact.

RUMORED IRREGULAR METHODS IN SECURING LICENSES

Some of the participants in the issuing, vending and receiving of these diplomas claim, with what appears to be firm convictions, that licenses have been secured through corruption of officials or members of licensing boards and even designate the states where this has been done, and occasionally the individuals involved.

According to these statements this corruption has resulted either in that the license was issued without any examination, or after a perfunctory examination usually individual and often only oral, or that the questions have been divulged in advance of the examination, or that members of the board have connived at the admission of impersonators to the examination.

These charges are usually rather indefinite, but I have listened to specific charges naming states and dates and individuals where it is claimed corruption in each of these lines has been carried out. A sustained attempt to follow a few of these charges to the end of getting real evidence has resulted in reaching a point where it cannot be recalled who gave the information.

Many of the men who have made these charges have a past career that brings a suspicion as to the reliability of any of their statements. Some better members of the medical profession believe all these statements to be only a backfire set to protect the diploma mill participants, and having no foundation of facts. As these charges stand they are only rumors. Rumors are difficult to handle. Denial does not lay them. All we can say at this time is that they are not proven.

IMPERSONATION IN LICENSING EXAMINATIONS

Impersonation in examinations is nearly as old as the licensing system. It was claimed when the certified photograph plan was adopted, with its certification by the dean of the school graduating the candidate or by the sponsors of the candidate, or by both, that the possibility of impersonation was blocked.

In my contact with some of these diploma holders, and with the principles and agents in the issue of such diplomas, I have heard recited with glee how this supposed photograph safeguard is beaten. It really is very simple. All that is necessary is to have the applicant, when he signs his name on the application blank, imitate the handwriting of the impersonator so that the handwriting on the application will be similar to that of the examination papers, and then to use the photograph of the impersonator instead of that of the applicant. Of course this involves connivance of the notary, the dean and the sponsors, but since licensing boards apparently never investigate notaries, since instances of acceptances of fictitious notary acknowledgments are known, since a dean who would sell diplomas would scarcely hesitate at a false certification of a photograph, and since the sponsors are never investigated it appears that the certified photograph plan is good where dealing with honest men, but as a method of protecting from impersonation in regard to graduates of incompetent or unknown schools it is not an infallible

security as at present carried out by many, if not by most of the boards.

It has been stated to me by participants that there was maintained a definite squad of impersonators ready to accept a usual retainer of \$500 to get a license in any one of several states. Whether this is mere boasting or has a modicum of truth I don't know, but putting together various bits of information, I am convinced that impersonation is going on to some extent in several parts of the country, probably usually undetected by the members of the licensing boards. As long as boards consent to have anything to do with the product of these incompetent and, according to my argument, potentially fraudulent schools, they should exercise an extraordinary degree of alertness in conducting examinations, and realize that they are dealing with individuals of low moral standard. It is all very well to talk about the honor of young men entering such a high-minded profession but the precepts and examples received by the graduates of these incompetent schools do not lead toward honor. This class of graduates consider medicine a business, not a profession, and their leading precept is that the end justifies the means, that securing a license is a means to make money and therefore that cheating to get a license is considered only business shrewdness.

CONCLUSION

A great French author wrote as his masterpiece a tale of squalor and crime with some of its scenes laid in the sewers of Paris. Victor Hugo wrote "*Les Misérables*" with the purpose of bringing vividly to public attention conditions that cried for reform.

The recital of this sordid dealing in fraudulent credentials and medical diplomas with some of its scenes laid in educational sewers and cesspools, like all other delineations of depravity, has little justification except to put you on guard against trickery and to derive certain lessons as to future procedure by the medical licensing boards, the authorized guardians of the public health.

There appear to me to emerge from such a consideration certain important principles which should be written into the credo of each licensing board and then conscientiously carried out by the executive officers, employees and members of that board.

1. The graduates of any medical school on the average do not rise above the level of the facilities, the efficiency and the ethical standards of that school. While an occasional individual may be better than the average standard of a school there are just as many or more who are worse. Therefore there is no justification in accepting a graduate of a deficient school be-

cause his is an isolated case, however much personal or political insistence may be exerted in his behalf.

2. Every board should possess itself of frequently corrected knowledge of the educational efficiency of all those schools, the graduates of which commonly appear before it. In the case of the schools in its own state that knowledge should be intimate and resting upon personal and detailed inspection by the board. Graduates of the little known schools or of schools of foreign countries should be denied admission to examination until extensive and authentic information is secured concerning the school.

3. Every board should have accessible data from which it can advise boards of other states as to intimate details of all schools within its own state, either now or previously existing.

4. A postgraduate or ad eundem or duplicate degree should not be accepted as evidence of proficiency except after careful inquiry into the training upon which the original degree was granted. Such postgraduates or ad eundem degrees or certificates usually represent short periods of study, loosely administered and generously scored. Some are fraudulent. The educational superstructure can be no better than the foundations will carry.

5. The medical diploma which is a parasitic twin of some cult is worthy only of contempt. A parasite is always more degenerate than the host from which it draws its nutrition.

6. No honorary degree should be accepted as giving evidence of proficiency.

7. The recommendations as to personal worth and moral character should be investigated to ascertain just how much each sponsor knows about the candidate and also as to the professional standing of the sponsors themselves and the worth of their judgment.

8. The authenticity of statements as to preliminary education should be directly investigated and it should be insisted that this education shall have been completed before the professional course was begun. No more in education than in architecture can the foundation of a structure safely and securely be built after the superstructure is in part or entirely completed.

9. Preliminary education authenticated by examination to establish an equivalent should immediately create suspicion of irregularities of proficiency.

10. Application blanks should be revised in various respects especially to establish scholastic accomplishment instead of mere record of time service through attendance.

11. Applications for license should be postponed or refused when presented too late to permit thorough investigation of the candidate's

educational history before the next stated board meeting.

12. No one expects that the end of fraudulent medical diplomas has arrived. The orgy of the past few years would have been improbable had the statutes of the various states been adequate and were the present statutes sufficient each participant could be commensurately punished. Now while the danger is in the public mind is the proper time to prepare for the next crop of diploma mill products. It is the duty of each state board to cooperate in, and inaugurate if necessary, the endeavor to secure in its own state, legislation making it a felony to participate in either the issuance, selling or receipt of an unearned diploma of medicine, or any other profession, such as dentistry and nursing that relate to public health. Progress depends upon evolving the fullest profit from the experiences of the past.

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PYLORIC STENOSIS IN INFANCY

REPORT OF THREE CASES

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CAPE GIRARDEAU, MO.

Of all the titles one reads which are meant to designate the symptom-group about to be described, the above seems to me the most suitable because, as Rachford says, it is non-committal. With all the differences of opinion as to etiology and treatment of this disorder lack of definite knowledge is very generally confessed, so how could any other style of title be properly chosen?

Congenital pyloric stenosis is incorrect because the symptoms rarely begin before the second week up to which time the babies differ in no way from those not to be afflicted; hence the word congenital is not suitable. Pylorospasm is incomplete for, though spasm may exist all through the illness, the muscle hypertrophy is a proven entity which the term pylorospasm leaves out of consideration.

According to Sauer the first clinical description and necropsy report of this disturbance was given by George Armstrong, of London, in 1777; Williamson reported a typical case in 1841 and in 1842 Dawosky reported the first case in the German literature. According to Pfaundler, Hirschsprung in 1887 gave a classic presentation of two cases before the German Society of Pediatricists in Wiesbaden. One of these was typically hypertrophic pyloric stenosis while the other seemed to belong to another group and the warning was given that there was danger of confusing two separate conditions with similar symptoms. Even today

this warning is not amiss for there is yet no unanimity of opinion on the distinguishing features of pyloric stenosis in infancy, pylorospasm and congenital pyloric stenosis.

The surgeons began to take special notice of this disorder in 1897 and a number of operations were performed, according to statistics, and now we have men, for instance Joseph S. Wall, who recommend surgical intervention as the proper treatment, as a rule. Today everybody is on the watch for this condition and every careful examiner will be rewarded.

As to pathology, there is general agreement that macroscopically an olive shaped mass,

the spasm is based. Who knows today but what the pituitary gland functions improperly, which dysfunction might in some way find its etiology in a tainted family history. I choose to present the cases now and conclude with remarks on prognosis and treatment.

REPORT OF CASES

Case 1. E. H., female, was the third child, born at full term unassisted. Father was a sufferer from chronic constipation. Mother had a severe paroxysmal cough with vomiting during this pregnancy and would have believed she was suffering from pertussis had she not gone through this illness in childhood. Father was a great worrier.



Fig. 1, Case 1.

varying somewhat in size but always firm, is to be seen at the site of the pylorus the lumen of which, always reduced, may or may not admit a small sound depending on the degree of hypertrophy. Microscopically it is shown that a true hypertrophy of the pyloric ring musculature has taken place. In some instances a thickening of the mucosa is noted either due to edema or catarrhal inflammation. Petechial hemorrhages and minor associations have been noted in the mucosa while the serosa is always normal.

There is no agreement as to the etiology of the disease and we are still allowed to form our own conclusions. I have been struck by the circumstance that not only in the three cases here to be presented is reference made to nervous parents but I noted it also in reviewing the literature. I believe that in the beginning there is a pylorospasm and that from frequent spasm hypertrophy results. There is an underlying imbalance of the autonomic nervous system of hereditary origin upon which

Patient was breast fed and very early manifested slight distress after nursing. She suffered occasional strangling spells while nursing. These attracted the mother's anxious attention but lasted only a few months. Aside from the above symptoms the child progressed favorably and gained some weight for two weeks when it suffered an attack of diarrhea followed by vomiting. Mother dates illness from this occurrence. The physician in attendance blamed mother's milk, hence artificial feeding was instituted with apparent success for a few days, after which the symptoms returned. Thus the patient went on from doctor to doctor, from food to food, nearly always showing temporary improvement on a new formula.

I first saw the child on June 7, 1911; it was now four months old. You may see from the series of pictures how greatly emaciated it was. Note its senile facies and what is more interesting its abdomen, wide and full above, showing the stomach outline in various phases of violent peristalsis, and narrow and flat below where but little food found its way. Its eyes were deeply sunken yet bright. Restless and whining, it was ever hungry and would grasp greedily and carry to its mouth almost anything offered it. It frequently drew up its legs and constantly had its thumbs clutched tightly by its other fingers. Its weight was 7 13/16 pounds, temperature 98, fontanels open and slightly sunken,

neck negative save for its thinness, heart and lungs normal. Observing the misshapen abdomen one could see, beginning in the left hypochondrium, traversing the upper abdomen and disappearing in the right hypochondrium, periodical peristaltic waves which plainly belonged to the stomach. Sometimes these waves were small and did not reach quite across; at times they divided the stomach into hour glass shape. Again they were enormous and the German expression, "der Magen baeumt sich," was most fitting; for verily the organ seemed threatening to plunge out of the abdomen. These waves were stimulated and their dimensions increased by the intake of food. That these contractions were painful is known by the early history of much crying and by the present whining, drawing up of legs and tightly clenched fingers. Evidently there has been some obtunding of sensibility in later weeks for crying is less. Vomiting occurred often and promptly after feeding; it was propulsive in type, unaccompanied by nausea. The quantity of vomitus sometimes corresponded in the amount of the last feeding and sometimes was in great excess thereof. Much mucus accompanied the vomitus, but no blood or bile.

There was never an indication of cardiospasm. The bowels never moved unaided by enema. The stool was scanty and scybalous. On the other hand urine was voided in large quantities. The patient generally cried for more food immediately after vomiting but was often content with a pacifier. The skin was loose and dry. If there were any other abnormalities they were obscured by the pyloric stenosis without palpable tumor.

Patient was given cow's milk 12 ounces, and water 36 ounces, treated with peptogenic milk powder, one ounce feedings every half hour. My theory was that since the child was still living and was voiding much urine, there must be some liquid portions of food leaking through the pylorus and therefore, predigested milk should pass.

June 8. Vomited only twice in past 24 hours; a more copious stool followed enema.

June 12. Child brighter, vomited three times since June 8 and takes a quart of formula in 24 hours. Weight 8 14/16 pounds, temperature 98.

June 16. Weight the same; had its first spontaneous bowel movement; rests better.

June 19. For three days child has been taking 1 1/2 ounces of formula every hour; she is cheerful and hungry; has vomited once in 48 hours. Formula increased to half and half milk and water subjected to predigestion with peptogenic milk powder.

June 20. Dr. Saunders was consulted and recommended whey, condensed milk and lime water. Patient took and retained food very well.

July 31. Severe diarrhea caused substitution of barley water for whey resulting in prompt control of diarrhea.

Sept. 30. Has cut two incisor teeth. Is taking gruels.

Oct. 14. Weight 13 pounds, looks fine, does not vomit, peristaltic waves still visible.

Jan. 2, 1912. Fine looking baby, weight 19 pounds, takes copiously of milk and gruels, vomits only if bowels fail to move daily, which failure is rare.

I saw patient many times and had numerous telephone communications with mother. The child grew up to be a well developed girl and when last I heard of her she was doing well in high school. Peristaltic wave was visible for many months after cessation of other symptoms.

Case 2. Baby girl, the second child, born at full term unassisted. Parents of nervous temperament. First child displayed a group of nervous symptoms at puberty.

Patient did very well at breast feeding for two weeks when she began to give evidence of pain while nursing, as manifested by drawing up her legs, dropping the nipple and crying. The milk supply at this time was plentiful. Vomiting soon supervened and it occurred shortly after each feeding, consisting sometimes of food just taken, sometimes being so great in quantity as to justify the belief that there had been retention from previous nursing. There was no nausea. Constipation was strongly manifested. The peristaltic wave while plainly visible differed from that in the previous case in its lesser intensity. Emaciation was just as great as in Case 1. The patient was put through the gamut of foods, always doing well for two or three days on a new formula. There was no real progress. At length gastric lavage was instituted and practiced every three hours, followed by the instillation into the



Fig. 2, Case 3. Barium meal.

stomach of modified cow's milk. This practice was continued for three weeks. It was observed that food introduced by tube was never vomited and patient was quite comfortable while the same food taken per spoon or nipple was followed by peristaltic waves, pain and vomiting. Analysis of fasting stomach contents on several occasions revealed anchlorhydria. The state of nutrition remained poor up to the ninth month and there was an attack of scurvy which responded rapidly to orange juice. After the ninth month the gain in weight was very rapid so that at one year patient was of normal weight. Recovery has been complete.

Case 3. J. D., male, 8 months old, was seen by me Dec. 11/23. One of parents subject to business worries.

Complaint: Attacks of abdominal pain associated with feeding. Shortly after feeding bends forward, grunts and finally cries out sharply while profuse perspiration covers head, face and neck. I observed these symptoms. Patient has been treated for various kinds of indigestion with different foods and drugs. Onset sudden in fourth month. This child is fairly well nourished and weighs 18 pounds. It has two lower incisors and is erupting an upper tooth. There is no need to recount a physical examination other than that pertaining to the digestive system. Abdomen is well rounded, there is an umbilical hernia which is easily reducible. Gastric peristaltic waves traveling across upper abdomen are plainly visible; they are aggravated and intensified

by his food and are accompanied by grunting, red face, sweating, drawing up of legs and some vomiting. After first onset of disease vomiting followed every feeding; it was propulsive, not preceded by nausea and sometimes vomitus had a foul odor. This patient had one small stool daily, generally thin, usually foul. Various foods have been resorted to, always with the result of an amelioration of symptoms for a few days with each new formula. A barium meal was given (barium 2 dr., milk 4 oz.). The first film gives us nothing of importance. The fluoroscopic examination revealed very active peristalsis; perfect cap and ring could not be detected but pyloric end of stomach was blunt. The 6 hour film shows how very little of the meal has left the stomach. Administration of cow's milk treated with Bulgarian bacilli was followed promptly by relief of all symptoms. Patient was taken away but I saw a photograph later which was testimony of great gain in his weight. I have learned since that all symptoms have disappeared.

Vomiting of mother's milk at a time when mother and babe should be adjusted; vomiting



Fig. 3, Case 3. Six-hour film.

propulsively soon after feeding or even while feeding without other dyspeptic symptoms but preceded by pain; the visible peristaltic wave,—these are the prominent symptoms. If a tumor is palpable at the pylorus the diagnosis of obstruction is quite complete. Scanty stools are significant and the general atrophy is of course a natural consequence of starvation. Improvement on a new formula temporarily and family history of nervousness are noted.

To be sure other forms of stenosis of the pylorus exist, such as atresia and myoma, but these are rare. Adhesions causing traction on the duodenum have also been encountered and found to have given rise to a similar symptom-

complex. Sometimes differentiation cannot be made clinically.

This is a disorder as grave as it is terrible and unless the patient is properly cared for it starves miserably to death. The prognosis is graver the later the diagnosis but there is now no longer an excuse for failure to recognize.

How should these cases be treated? Why should I suggest surgical measures when I have 100 per cent. recoveries otherwise? Yet given another case like Case 2 I would advise surgery. Besides, as I look back, it seems to me I may have signed a certificate or two "gastritis" or "marasmus," when more careful examination might have revealed pyloric stenosis.

The treatment resolves itself into three forms, dietetic, medicinal and surgical. As I explained before, my theory was that given a narrowed pylorus, yet with a copious excretion of urine, some liquid must be leaking through the pylorus while the scanty stools argued for a failure of curds to pass. The symptoms improved following this theory of treatment.

Sauer feeds his cases thick gruels and gets perhaps even quicker results. In a sense this is paradoxical, for why should thick foods pass where thin ones will not? We have an analogy for an explanation in the catheter of large caliber which enters readily into the bladder that will not receive one of smaller caliber because the latter excites a spasm of the sphincter. Ernberg recommends breast milk, butter milk and hypodermoclysis to prevent dessication and reports a mortality of 3.5 per cent. With drugs I have had no experience. I fear such violent poisons as atropine in babies so young and am sure that many a death certificate should have read poisoning rather than have carried the name of some disease. In my opinion drugs are not necessary.

The earliest surgical measures consisted in gastro-enterostomy with such frightful mortality so as to terrify even the surgeons. Besides it was noted in cases of recovery that the food ran rapidly out of the stomach through the artificial stoma while the pylorus did not functionate and the tumor remained: The great fault lies in an insufficient exposure of food to the gastric secretions. The Rammstedt operation consists in merely cutting through the hypertrophied muscle to the mucosa and dropping the pylorus back into the abdomen. The patients are on the table but fifteen minutes, the result is prompt and early, mortality is 15.3 per cent. and postmortem examinations on children who died later in life from other causes showed that the hypertrophied muscle had disappeared. The mortality at the hands of specially trained surgeons has been reduced to 2.8 per cent.

The conclusions to be arrived at, are: That

most likely the majority of cases begin with a pylorospasm which is followed by hypertrophy of the pyloric muscle, a result of the spasm; that early diagnosis be made in all cases. That in view of the undoubted tendency to spontaneous recovery proper dietetic treatment be instituted and carried on with great care. In the event that improvement is not prompt, surgical intervention should be resorted to. Since the Rammstedt operation is effective and can be rapidly executed it is no doubt the procedure of choice today. It would not be my desire to continue hypodermoclysis over a protracted period if operation could properly be performed.

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ABSCESS OF THE PANCREAS*

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This lesion is not extremely uncommon and should be considered in the differential diagnosis of conditions presenting epigastric distress. Diagnosis is usually made at operation or autopsy. Otherwise, many cases remain unrecognized. Even at operation the condition may be missed because of the hidden position of the pancreas. Abscess of the pancreas is operable and can be cured.^{1,2,3}

With some knowledge of the pathogenesis, diagnosis of such cases is more readily made. The following is reported in order to compare the anatomical findings with the clinical course.

REPORT OF CASE

Autopsy findings. The body was that of a well developed but extremely emaciated young white man. The teeth and tonsils were apparently in good condition.

A liter of clear, watery, amber colored fluid containing a few balls of white fibrin was collected from the peritoneal cavity.

The omentum was rolled up and normally free except one narrow strip which was attached by thin, firm, glistening fibrous bands to the tip of the appendix. The vessels in the vicinity of the ascending colon were injected, especially at the cecum. Otherwise, general inspection of the thoracic and abdominal cavities revealed no marked change except some pale yellow, threadlike streaks in the jejunal mesentery between its dorsal attachment and

the vascular arch, parallel to the small blood vessels.

The free surfaces of the liver were uniform chocolate color and the edges not unusually round. But the gallbladder contained only a little colorless mucoid material.

No ulcers were found in the lining of the stomach or intestine. The mucosa at the ampulla of Vater was not grossly changed, but thick yellow pus is-



Fig. 1. Section of liver showing biliary distribution of abscesses and unchanged free surface.

sued into the duodenum at this point. The common duct was narrow, but the hepatic duct and its branches were distended by pus.

No gallstones were found.

An abscess occupied the half of the pancreas nearest the duodenum and its thin wall rested against the hepatic bile duct. The content of the abscess cavity was thick mucoid yellow pus streaked with green and the lining was gray necrotic material approximately 5 mm. thick.

Direct smears of the pus revealed large numbers of Gram-positive streptococci.

The appendix vermiformis was narrow and firm except the proximal part, and its lumen partially obliterated.

Anatomic diagnosis. Recurrent appendicitis; solitary abscess of the head of the pancreas; suppurative cholangitis; ascites; cloudy swelling of the kidneys and spleen.

Clinical history. The patient, a laborer 25 years

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old, entered the Kansas City General Hospital the middle of September, 1925, complaining of chills and epigastric pain. For six years he had suffered intermittent abdominal distress from which only partial relief was obtained by liquid foods, belching or passing flatus. He had been constipated. He thought his distress worse when he ate meat and attributed his present attack to beef eaten two days earlier; but the chills had started six days before that time. His distress had localized at the epigastrium.

Examination. The young man did not appear acutely ill but had a polymorphonuclear leukocytosis of 20,000 and a hectic fever. There was slight epigastric rigidity and tenderness on deep pressure at this point and also over the appendix.

Course. He refused operation. The pulse rate

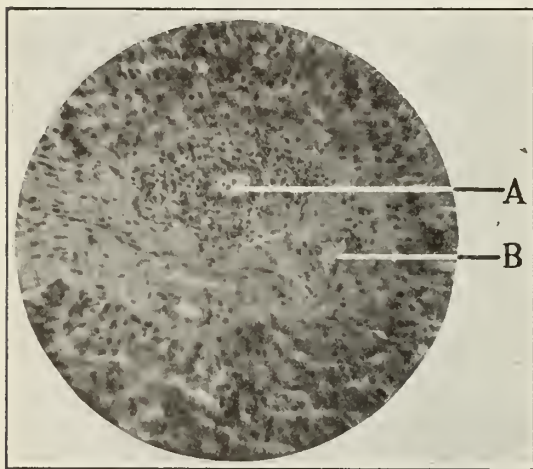


Fig. 2. Liver under high dry lens showing leukocytes around and in bile duct, A. B., blood vessel.

was 90, the respiration 25, and the temperature had a regular afternoon peak as high as 105.8 degrees. His appetite was good.

Eighteen days after admission, a slight jaundice appeared for less than 36 hours and the temperature touched normal for the first time. The epigastric pain diminished, but from then on the patient grew rapidly worse. The fever peaks were less high. Emaciation became marked and the patient "looked like a living corpse."

October 7, after a chill at midnight, the temperature dropped to 96.2 degrees and the abdomen began to swell. Repeated fever peaks followed in close succession, the pulse rate went to 150, the respiration to 55, and October 20 he died.

At no time was sugar found in the urine and the other routine laboratory tests did not point specifically to pancreatic disease.

From this history, it appears that the abscess in the pancreas, which had been present from the time the abdominal distress localized at the epigastrium, ruptured into the bile ducts when the jaundice appeared. Of course after this the infection spread rapidly to various parts of the liver, the temperature zigzagged up and down as new regions were invaded, there was severe toxemia and much interference with digestion. Ascites was probably due to obstruction in the portal circulation.

DIAGNOSIS

The diagnosis of solitary pancreatic abscess

is based on the signs and symptoms of suppuration, and upon signs and symptoms localized to the pancreas. The chills, sweats, hectic fever and leukocytosis are characteristic of suppuration. That the pancreas is the seat of the lesion is indicated by midepigastric tenderness to deep pressure and an enlarging tumor mass^{4,5} between the stomach and transverse colon. Vomiting is less likely to occur in perforated gastric ulcer. In suppurative cholecystitis the gallbladder is usually tender, and in liver abscess, the liver. Subdiaphragmatic abscess seldom occurs in conjunction with suppurative pancreatitis.⁶

Occasionally abscess in the tail of the pancreas may be confused with left perinephric abscess.⁷

ETIOLOGY

The chief predisposing factors to be borne in mind are cholelithiasis, penetrating ulcer of the stomach or duodenum, pyemia, duodenitis and appendicitis.^{6,8} The bacteria most commonly found are *B. coli* which may ascend Wirsung's duct during bile stasis,⁹ or according to the report of Abrami, Ch. Richet fils and Saint Girons,⁶ may be excreted from the body via the pancreatic ducts. Streptococci are also found, and only very rarely staphylococci and pneumococci.

PATHOLOGY

Multiple abscesses of the pancreas may develop in pyemia. The solitary large abscess which is operable usually occurs in the head of the pancreas, but may be in the tail when secondary to perforated peptic ulcer. The abscess in the head usually points anteriorly between the duodenum and stomach where it is readily accessible surgically. It may rupture into the bile ducts with resulting cholangitis, or into the liver with subsequent thrombophlebitis. It may discharge into the stomach. Abscess of the tail may rupture behind the pancreas and the pus spread out around the left kidney.

CONCLUSIONS

Abscess of the pancreas should be considered in the differential diagnosis of upper abdominal lesions.

The condition is operable and can be cured.

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PRIMARY CARCINOMA OF THE LIVER

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Primary carcinoma of the liver is comparatively rare. In view of this fact we feel warranted in reporting this interesting specimen for future record with a very limited review of the literature.

Primary carcinoma of the liver, rare as it is, has been the subject of considerable study, making some headway only probably in clinical diagnosis but none as to treatment. The etiology is still obscure as in other forms of malignancy.

Castle,¹ in reviewing the literature of the world from 1841 to 1913, collected 43 cases. In 1918 Griffith² reported 5 cases. Marchwald,³ who entitled them multiple adenomata, states that in view of the size of the growths and the amount of change present in the liver, as well as the well known close association of adenoma and adenocarcinoma and the difficulty in distinguishing them, it seemed justifiable to include them in the cases given. Others have reported a few sporadic cases which have been well discussed in literature generally and in abstracts of 44 case reports of Steffen, Castle, or of Griffith.⁴

Clinically we may state that it is practically impossible to describe the symptoms as these are entirely uncharacteristic and depend to some extent upon the mechanical effect of the growth. There is present emaciation and cachexia, as the case report will show, no ascites or icterus; edema of lower limbs occurs only in the terminal stage of the illness, which one would look for in such a condition as a large liver. The rapid growth of the liver with intermittent pain and gastric distress and distension are of clinical importance.

As nearly as can be determined from the reports of other observers, the massive type seems to be found most commonly in early life. All other types, which as a rule have their origin from bile duct epithelium, are more common in later life as this specimen shows; we feel that this case is of special interest as the patient reached the ripe old age of 87, only to be incapacitated and complaining for about 5 or 6 weeks.

REPORT OF CASE

March 17, 1924, J. G. C., educator, male, aged 87 years, single, height 6 feet, weight 180 lbs. First seen at hospital this date. Family history negative. Had always enjoyed good health with the exception of hernia of 40 years standing for which a well fitting truss had always been worn. Habits had always

been regular. Present illness dated back to about four weeks before, when patient had had "influenza." Since then patient had complained of pain in right upper quadrant extending posteriorly to the base of lungs, with temperature, and had been gradually growing worse.

Examination showed a large, well appearing, fairly nourished individual, skin in good condition for age, temperature 99.2, pulse 148, slightly irregular, respiration 24. Eyes and nose negative. Mouth, upper and lower bridge with second molar stump, right upper. Hearing slightly impaired. Thyroid not palpable, head bald and abnormal pulsation present.

Chest large, respiration slightly impaired in right lower lung with bronchovesicular breathing increased, occasional squeaks over bronchial area. Increased vocal sounds and tactile fremitus with dullness right lower posteriorly, with rales. Small rales and pleural roughening over this area.

The heart showed slight arrhythmia and the outline of cardiac dullness to be 8 cm. in the 5th intercostal space, with a soft systolic murmur transmitted to axillae. Action was weak and showed myocardial changes. The blood pressure was 162/84.

Abdomen. Panniculus was moderate. There was a mass in the right upper quadrant which was in all probability the liver as the outline was irregular. It was 4 cm. below the costal margin. There was an impulse on coughing in the right inguinal region.

Rectal examination showed sphincter of moderate tone and prostate equally hypertrophied but not painful. Extremities showed large bony frame, no pigmentation, arches regular and anterior tibia region irregular. Reflexes: Knee jerk sluggish but regular. No Babinski or ankle clonus. Urine was pale yellow, reaction neutral, specific gravity 1018, a very faint trace of albumin and no sugar. No casts were found and a few W.B.C. The blood coagulated in 3 1/2 minutes; hemoglobin 80 per cent., R.B.C. 3,864,000, W.B.C. 9,200, polymorphs. 64 per cent. small lymphs. 32 per cent., transitionals 3 per cent., eosinophiles 1 per cent.

The tentative diagnosis was, hyperstatic pneumonia, (post influenza), myocarditis with valvular disease, hypertrophied prostate, arteriosclerosis, pleurisy, liver hypertrophy and gallbladder disease.

Summary: The case presented itself with rather obscure findings over the liver region and gallbladder vicinity. The liver seemingly continued to grow in a downward direction. At times it appeared to be extending with measurement changes from 4 cm. to 6.5 cm. At no time did the superficial veins show prominence. No ascites or edema was present, excepting in the terminal stage of illness. The patient gradually grew weaker, with no temperature, apparently with little pain and with slight trouble in swallowing. Died April 18, 1924, after 30 days of observation.

Autopsy report: We found no pathology in the alimentary canal from the throat to the anus. The liver was very much enlarged and the gallbladder without adhesions was about three times the size of a hen's egg and filled with stones about the size of a pea. The liver was riddled with areas of cancerous growth. There were very evident sclerotic changes in all the large vessels. The apex of the heart was adherent to the pericardium by well organized adhesions. No evidence of any trouble in the stomach, esophagus, small intestines, large intestines, bladder, kidneys, or spleen. The head of the pancreas was not involved and there was no evidence of cancer in the duodenum or pylorus. The lungs showed pneumonic changes in the right lower lobe.

Postmortem Diagnosis: 1. Arterial sclerosis. 2. Chronic myocarditis with valvular disease, mitral valve dilatation. 3. Numerous calcified deposits, nodules seemingly of liver, macroscopically, cancer; arterial sclerotic changes, probably cancerous in character.

Laboratory report by Dr. R. L. Thompson showed: Spleen: Weight 160 grams. (Normal size). Capsule thickened and wrinkled on section, dark red in color; trabeculae prominent. Shows no evidence of metastasis.

Pancreas: Normal size and consistency. Shows no evidence of metastasis. Pyloric portion of stomach and duodenum, including duodenal papilla, normal throughout.

Liver: Weight 2500 grams. Measures 30 by 22 by 14 cm. Surface is uneven and is studded throughout with innumerable tumor growths varying in size from tiny pin point nodules to areas from 3 to 5 cm. in diameter. For the most part, these are discrete but may show coalescence. The gallbladder is enlarged and filled with innumerable small, irregular calculi. Microscopic sections from the liver show extensive destruction of liver parenchyma, with some compensatory fibrosis and bile duct proliferation. Pigment is richly distributed through such areas and blood vessels are greatly congested. The carcinomatous nodules are made up of masses of epithelial cells with tendency to acinar arrangement. The cells vary greatly in size and shape and show occasional mitotic figures. There is also a fair amount of connective tissue separating the groups of cells.

Diagnosis: Adenocarcinoma.

DISCUSSION

"I am informed that a careful autopsy was performed on this case and that no evidence of cancer was found anywhere else in the body." This brings up the question of primary carcinoma of the liver in this case. These tumors may arise from liver cells or from bile duct epithelium and, in a large percentage of cases, cirrhosis is a predisposing factor. The present case would correspond with the described cases of multiple adenoma or carcinomatous cirrhosis. The cases usually develop after the fortieth year though they can occur in children. Both the gross and microscopic structure previously described is characteristic of this disease and I think this case can be included in this category."

CONCLUSION

As will be seen by this report it is practically impossible to diagnose this condition during life and we extremely regret that we cannot suggest, with the exception of the rapid and painless enlargement of the liver with no ascites, varicosities or edema, some hypothesis for a better clinical symptomatology.

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AN ALLEGED SYMPTOMATIC CURE OF PERNICIOUS ANEMIA*

CLINICAL SUPPORT BASED ON A CONSECUTIVE CASE REPORT

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Anyone accustomed to promoting revolutionary ideas, either personally or by proxy, must be aware of the strenuous opposition to be met. Now, judged on the basis of seriousness of the opposition, my very simple proposition may well be true, though admittedly foolish ideas are much more common and are also opposed—usually, however, with less insistence, unfairness and bitterness. The widespread assumption made by succeeding generations that now finally the human brain has "evolved" towards a Utopian state of open-mindedness, probably has some slight relative justification in fact. But the overwhelming percentage of "bunk" in this self-satisfaction can only be properly evaluated when some serious student of a succeeding generation smiles at what the present generation knew so positively and becomes indignant at the genuine truths rejected, often without audience or test. After this preamble some of you may have jumped to the conclusion that not all the highbrow specialists in internal medicine have taken kindly to a very simple proposition, which intrinsically calls for certain corrections in their fund of allegedly settled knowledge. If you have not taken that jump, take it now, because it is the truth! On the other hand I am delighted to acknowledge grateful indebtedness to a number of leaders in internal medicine for their interest, open-mindedness and encouragement which tribute applies in equal measure to a number of local practitioners as yet, at least, unknown to fame. The open-minded on this proposition will need no further explanation of the tone in which this argument is cast; to the others in the present status of the treatment of pernicious anemia my only reply is to fall back into the vernacular, "I ain't a arguin' with y'u I'm a tellin' y'u."

But the asset to this physiologic opposition to new conceptions by the established order in the warning it gives to any inventor to strengthen and check and recheck his case. Thus it happens that a reasonable amount of clinical checking had been done before I dared even publish my "Working Hypothesis As To The Cause And Cure Of Pernicious Anemia" in the December, 1922, number of the *Journal Missouri State Medical Association*. The theory promoted was that both the character-

*As presented at the St. Louis Medical Society, Oct. 14, 1924, with addenda to December, 1925.

istic gastro-intestinal upsets and the anemia of the pernicious type are *exclusively* secondary to a chronic very marked diminution of the hydrochloric acid secretion in the stomach; if this proposition is true, all the symptoms and signs of this hitherto considered necessarily fatal malady will yield to physiologically sized and repeated doses of HCl, provided nothing extraneous is done which injures the patient. In the final analysis the fact that parts of this conception have been disproved repeatedly is not discouraging, but rather the reverse, for my argument runs that the hitherto universally repeated error has been in the proof, *not* in the proposition. Nor need we worry unduly about the generally accepted belief of the passing generation that hydrochloric acid can be chronically absent from the functioning stomach contents without showing gastric pathology or causing any symptoms. For while contradictory propositions obviously cannot both be true, our side has at least the evidence that Nature or God—take your own choice—went to a lot of trouble to build hydrochloric acid secreting glands and to equip them for regulated functioning. So our proposition becomes bigger than the mere treatment of established cases of pernicious anemia in that it may help correct established errors in our understanding of gastric physiology and pathology, and thus lay a rational foundation for prophylaxis.

Now in reporting a series of cases of pernicious anemia the easiest cases to cure and maintain in health are these in which the diagnosis is based on errors. The psychology of the necessary double error is that either the clinician or the laboratory worker makes the original mistake and then the other coaxes his findings to coincide instead of using them as an independent check. Therefore it is important that sufficient evidence be submitted in every instance both as to clinical and as to laboratory findings to substantiate the diagnosis. In order to avoid constant repetitions every case diagnosed as pernicious anemia in this series gave the following history and findings before treatment was started, all exceptions to the contrary being noted under separate cases: a gradual onset extending back six months or longer; marked gastro-intestinal upsets including diarrhea, gaseous distention and foul fecal discharges; a very low grade gastric acidity, the total being usually well under one-sixth of the normal, with of course no free HCl; a distinct yellowish tinge to the skin and which was readily noted in the sclera; a color index of one or higher, that is the pallor is due to an actual shortage of erythrocytes and not to a lack of hemoglobin in the individual corpuscles; a distinct irregularity in the size (anisocytosis)

and shape (poikilocytosis) of the erythrocytes, and also nucleated reds; a normal or subnormal leucocyte count, including differential whenever same was done; paresthesias and muscle weaknesses in arms and more particularly in legs; no vocational or other reason to suspect extrinsic poisoning; and finally a lack of symptoms or physical findings of any other serious disease. Unless otherwise indicated all the consultants listed are St. Louisans, all chancing to be men of standing. The accuracy of the laboratory reports, which were made by skeptical independent workers, was usually checked by the fact that the patients felt, looked and acted in reasonable conformity to the findings. At one stage or another Dr. Ives examined practically every case and his findings proved accurate in every instance, as verified by other competent workers and on the negative sides by the subsequent development in the case.

This brings us to the report of the eleven consecutive cases personally followed to date or to postmortem, which by free and mutual consent will appear only in the author's reprints. (The editors of this JOURNAL were liberal in granting this appeal to general practitioners, so let us not impose unduly when a postal request will selectively save paper and ink.) Since the birth of specialists their greatest asset has been that they knew more than generalists and knew it harder but that unfortunately also usually includes more that "isn't true." Which is the underlying logic as to why historically the overwhelming majority of experts have consistently opposed genuine advances. It emphasizes the importance—nay, the necessity of an appeal to a broader audience, if medicine, or for that matter any other art or science, is to progress.

A SINGLE VERSUS MULTIPLE THERAPIES

These omitted reports complete my brief of the clinical results when my theory was put to the acid test of practice. Undoubtedly many will argue that because the final results in this series were little if any better than other series in the literature, therefore this treatment is no improvement over the various shotgun methods in conventional use. Now if I had any wild theory about causing new functioning glands to grow in a completely atrophied gastric mucosa such criticism would be sound. But on the facts and theory submitted, I feel very strongly that this treatment should only be held responsible for clinical results during such time as it is intelligently and faithfully carried out. This report at least approaches a true scientific research in so far as it limits itself to what can be accomplished by a single therapeutic agent but unfortunately no scientifically acceptable control is available. The fact that these patients were more or less steadily

going down grade before the HCl treatment was started served as my personal control, and this partial control must be conceded a certain amount of value. A number of reports exist (some of which have scientific value in that they record consecutive cases) on what can be accomplished by blood transfusions, arsenicals and splenectomy, but practically always these agents are used in combination with each other and also with what I should consider inadequate, and yet for the limited diet stages perhaps adequate doses of HCl. Now while it is perfectly fair for everybody to use general hygiene, which should include appropriate care of genuine incidental foci of infection, my conception is that blood transfusions, arsenicals and splenectomy are being given credit which rightfully belongs to the HCl treatment. For those who have faith in blood transfusions, arsenicals or splenectomies, etc., my suggestion would be that they test such agents in a consecutive series, taking special care to exclude HCl or organic acid accessory treatment. Such a test once started should be reported irrespective of result, because it would have genuine scientific interest and value. In regard to my personal series I am perfectly willing to concede that the evidence is more conclusive of the dumbness and lack of perseverance of the average of humanity than of the proposition I started out to prove. However, these patients were willing to try out an admittedly experimental treatment and several of the mishaps were directly due to the set opposition of regular physicians.

In this series no splenectomies were done and no blood transfusions after the patient was once fairly started on the intensive HCl treatment, so the only interest in this connection is as a control as to what can be accomplished without splenectomies and blood transfusions. As regards the only two tests of the intensive administration of arsenicals combined with intensive HCl treatment, Case 1 failed entirely to improve, while Case 2 was made distinctly worse. Cases 3 and 10 were the only other cases to ever get intensive arsenic therapy, without HCl addition, and both lost ground materially during period of said treatment. Here let me repeat with additions my argument against the use of arsenicals as outlined in my original publication; that no rationale backs their use in this disease; that any combination treatments are valueless for scientific deductions; that arsenicals are a blood irritant, eventually poison, and hence even in small dosage presumably act only by the over-production, which commonly follows destruction; that in many individuals, more particularly when severely anemic, no secondary over-production follows this blood destruction, not

even temporarily. In support of this viewpoint several articles in the very recent literature recognize that arsenicals may usher in an aplastic, that is nonregenerative type of fatal anemia.¹ A further objection to arsenicals is that even in apparently healthy individuals their use may be followed by other symptoms closely mimicking or even indistinguishable from those of genuine pernicious anemia, i. e. gastrointestinal disturbances, lowgrade icterus and a peripheral neuritis. While in so small a series it may obviously be purely a coincidence, Cases 3, 5 and 7 were the only ones who had definitely never taken arsenicals, and their minor nerve symptoms practically disappeared when the blood picture returned towards normal. Whereas on the reverse, Case 11 for example, with no recorded blood picture below 2,000,000 and for many months the r.b.c. counted at over 4,000,000 still suffered from a very marked muscle-nerve disability. This patient had undergone a year's treatment exclusively with arsenicals before coming under my care.

PHYSIOLOGIC CONTROL OF HCl DOSAGE

But here a warning against the very real danger that this half-truth of mine will be so overdone as to become a downright falsehood. While my advocacy of what I consider physiologic dosing of HCl in pernicious anemia is as strong as I know how to put it, it is an absolutely essential part of the theory that the dosage be varied according to the amount and character of the food ingested. For example, if the patient's digestion is temporarily at so low an ebb that only a single glass of whole milk can be given during the day, 30 drops of dilute HCl is the proper theoretic dosage, while the preferred buttermilk calls for only one-third of that amount. But when the patients come out of the acutest stage and the diet becomes more liberal, the total dose per day should increase progressively, more particularly following the ingestion of meats. After the patients improved markedly I liked to have another gastric analysis done, because any return of gastric secretory power (as presumably happened in Cases 1, 5, 7 and might well have occurred in Case 3) gives a clue that the dosage may be safely decreased. Case 3 which came to postmortem following a maniacal complication at the end of about ten months of definite symptoms, surprised me by showing practically all of the gastric glands present, though to be sure these glands did show chronic inflammation. Whether this pathologic process would have gone on, had the patient lived, to a complete atrophy or stopped for years at some intermediate status, is unanswerable from the specimen. But this finding

checks with the well illustrated and authenticated cases of Faber² and others in the literature while Weinberg³ found 3 cases out of his 11 consecutive postmortems showed no atrophy of the gastric mucosa and half of the remainder showed only earlier stages of the shrinkage process. Our postmortem evidence today therefore only definitely excludes the possibility of any return of gastric HCl secretion in less than half of our clinical cases.

Without definite evidence of a certain amount of return of gastric secretory power my tendency would be to keep every pernicious anemia patient up to the 15-30 drop repeated dosage in a half glass of water until (according to my story) all signs and symptoms have vanished. Then the dose may be decreased cautiously, increasing again, however, on any return of gastro-intestinal symptoms or loss of color. Inasmuch as the normal stomach secretes the equivalent of 500 to 900 drops of dilute HCl daily, depending upon amount and character of food ingested, it is obvious that practically no danger of overdosing exists, even though the patient's own stomach is itself secreting considerable acid during a remission. However, the warning that any particular patient is being overdosed is a sense of burning in the stomach followed by intestinal cramps and perchance a diarrhea. This information had better be kept to yourself when treating a neurotic patient, lest it be used as an excuse for cutting down medication. This burning may also occur without overdosage if patient does not take the HCl in at least a half glass of water. Finally in order to improve digestion and minimize the requisite amount of HCl it is obviously essential that the food intake be positively restricted to the minimum amount consistent with genuine hunger. Unless specifically and continually instructed to the contrary the laity will take very much more of the acid-hungry proteins than is consistent with a balanced diet or their welfare. My individual patients varied markedly as to the single dose taken without discomfort, the minimum in a half glass of water being 15 drops and the maximum 30 drops, but all could repeat these doses when on general diet from 3 to 5 times at half hour intervals without any complaint.

Now while I am advocating making up artificially and continuously the deficiency in the normal HCl secretion due to permanent organic changes in the gastric mucosa, let me emphasize here that the problem is entirely different in a temporary acute achylia gastrica. Whenever your patient has a complete lack of appetite and a heavily coated tongue not due to local mouth disease, the chances are that a gastric analysis would show a marked diminution of the normal HCl secretion. But it would

obviously be the height of folly to dose every such patient with hydrochloric acid, even temporarily, when all human experience has demonstrated that a purgation followed by a restricted diet until the appetite picks up will clear up rapidly the overwhelming majority of such cases. Such acid treatment would further not be theoretically sound because if the liver and pancreas have also received a jolt the indications are for a short period of rest and certainly not forced activity.

Now when this symptom of coated tongue plus probably acute achylia gastrica is associated with some other illness it is just as obvious that before marked improvement in this symptom can be expected, the original source of the disturbance must be brought under control by appropriate measures. Incidentally the craving for fruit acids by the patient with a heavily coated tongue probably shows a physiologic need, as is recognized in practice by all reasonable physicians of today. This conception is reinforced by the common knowledge that certain lenteric diarrheas, which have resisted all other measures, yield promptly, in reality dramatically, to repeated small well diluted doses of HCl, sometimes given in combination with a small amount of nitric acid. My present conception perchance gives the rationale for this clinical procedure which was previously for me at least based purely on empiricism. Then when the patient's gastro-intestinal tract has improved under purgation and rest sufficiently to allow it to tolerate any real nourishment at all, the patient's instinctive desire generally coincides with the scientific opinion, which advocates foods of a low acid buffer value, i.e., soured milk, soft foods artificially acidulated slightly by HCl, or any other appropriate foods slightly acidified by fruit juices.

The scientific basis for the well known clinical fact that an infant's disordered stomach will generally tolerate soured milk much better than sweet milk has been worked out recently beyond reasonable doubt by Marriott⁴. He demonstrated definitely that such infants have lessened gastric secretory power, and further that milk soured by lactic acid requires materially less HCl for acidification, the technical phrase being a low acid buffer reaction. Faber⁵ has demonstrated further that when HCl in suitable doses short of excess free acidity is added to the whole cow's milk, clinical results paralleling those of Marriott can be achieved. Both of which depend upon changing the alkaline phosphates of the milk into acid phosphates and acting also upon the calcium caseinate. Which scientific work of the highest order is genuinely supported by the recent run of soured food articles and advertisements in the popular

health magazines. For after all faddists are just ordinary humans, over enthusing about their truth so greatly as to make it pathetically in greater part a falsehood. More scientifically in the case of a transitory disturbance in an adult, such measures are indicated only for so long as the achylia gastrica lasts, at the end of which time the diet should of course return to the normal. To summarize my attitude towards HCl treatment: it is definitely indicated in a permanent organic achylia gastrica; it is definitely contraindicated in an acute transitory achylia gastrica; it deserves more extended trial in intermediate disturbances of gastric digestion in the form of foods acidified by organic acids, and perchance in much smaller dosage HCl itself may be found to aid the digestion in disturbances associated with long continued fevers and other chronic illnesses.

FALSE VERSUS TRUE ACHYLIA GASTRICA

My personal judgment is that most of the pernicious anemia patients in this report were victims of the severe type of the disease which without any acid treatment would in all probability have resulted in their death within a year from the time first seen by me. As most of these cases, even those under the care of competent physicians, had not even had homeopathic doses of HCl continuously, the reaction to intensive acid treatment chanced to be marked in all instances in this series. The improvement in digestion was practically immediate, followed by progressive improvement in all symptoms, as checked in the case of the blood by the laboratory reports. And the converse also checked out, inasmuch as when they cut down on or stopped their acid, both the digestion and the blood picture became progressively worse except as detailed in Cases 1, 5, and 7. But cases are quite common which have absolutely the same symptoms only in a much lesser degree. As the onset is often very gradual many of these patients, even among prosperous, intelligent classes, go on for years without even consulting a physician until some chance exacerbation brings them under professional care.

So far as my experience goes all of these patients have a chronic subjaundice coloring of the skin and sclera and I feel so strongly on this point that I am willing to risk the negative until the contrary is proven beyond the peradventure of a doubt, that is unless the patient has this chronic subjaundice hue, either he is not suffering from a really serious gastric hyposecretion, or this hyposecretion is being compensated for by the artificial administration of mineral or organic acids in appropriate dosage. This contradicts categorically the oft repeated assertion that patients can

have continuously a complete absence of free HCl without showing gastro-intestinal and hemic symptoms. Obviously this proposition and my major proposition cannot both be right. Certainly the overwhelming majority of our genuine gastric hyposecretion patients do show symptoms, in which case our laboratory finding is checked by the clinical fact that said patients improve markedly on appropriate dosage of HCl. As for the very exceptional cases where the laboratory finding is not corroborated by the clinical symptomatology it may very well turn out to be a fact that the routine gastric analysis is here at fault. Granting fully its importance and reliability on the positive side, after all even oft repeated negatives should never be accepted as infallible, for scientifically all that has been proven is that on such and such occasions the patient's gastric secretion did not respond conventionally to an insipid diet.

The only direct scientific research on this proposition coming to my attention is by Sahli⁶ who uses an absolutely original method which depends upon the gastric digestion of catgut releasing methylene blue and iodoform into the blood stream, eventually searched for in the urine and saliva respectively (known as the desmoid test). This strand of *raw* catgut will be digested only in cases where the stomach pours out sufficient HCl to have it appear as a free excess. This catgut-closed rubber sac is taken with an ordinary meal and demonstrates that many so-called achylas, failing continuously to react to an insipid white bread water mush, do pour out gastric secretion liberally in response to real food. Further Marriott⁴, who has worked out an absolutely original test for the gastric acidity in infants on their normal diet, finds that unless gastric contents reach a certain minimum acidity, gastro-intestinal upsets follow continuously with almost mathematical accuracy. These are the only two tests known to me which register the chemical reaction of the stomach to a physiologic diet, and both support my contention in contradicting the story of marked decrease of HCl secretion without symptoms. Finally the very latest test of gastric functioning, the hypodermatic injection of neutral red,⁷ proves negative in all active pernicious anemia cases, whereas many so-called achylia gastricas yield an absolutely normal secretion of neutral red into the stomach contents. But while quoting these authorities in support of my contention, it is only fair to admit that the overwhelming majority of gastro-enterologists and clinicians accept repeated negatives of the conventional gastric analysis at their face value, even in spite of a complete lack of gastro-intestinal and hemic signs and symptoms.

But in such obscure doubtful cases Van den Bergh⁸ and Meulengracht⁹ have comparatively recently brought out a test which may well prove enlightening in separating the true from the spurious achylia gastrica. This test separates the bilirubin from a given volume of blood and measures it against a standard scale, all the essentials of which can be studied in the discussion by Bernheim¹⁰. This icterus index (bilirubinemia) strikes me as unnecessary for any trained observer in so marked a condition as active pernicious anemia, except when patient belongs to an extremely darkly pigmented group, but may well prove of prime importance in following results with scientific accuracy during remissions under treatment and in borderland cases. My conception is obviously that no increase in the icterus index means a false achylia gastrica diagnosis.

GASTROGENOUS PSEUDO-PERNICIOUS ANEMIA CASES

But now to get back more directly to our proposition, if this subjaundice appearance (or high icterus index) is reinforced by a chronic marked gastro-intestinal indigestion and a definite anemia the chances are overwhelmingly that you have to deal with a mild case of what I consider anemia secondary to inadequate gastric HCl secretion, in other words a gastrogenous anemia instead of what has heretofore been called pernicious or Addison's or Biermer's or primary anemia. Even if your pathologist reports the anemia only as suspicious of the pernicious type and the gastroenterologist finds only a marked decrease of the normal HCl secretion, other causes for the symptom-complex being reasonably excluded, my judgment would be to give such a patient a clinical test of the HCl treatment in moderate dosage. Which advice might well be backed by the essentials from two personal case reports.

REPORT OF CASES

Case 12. J. M. W., then a very vigorous type man of middle life, had over 15 years ago a mild subjaundice coloring, which was, however, just as obvious to lay as to professional eyes; no marked change in status for perhaps five years when he finally consulted physicians and our best known hematologist of the day, the late Dr. Tiedemann, reported his blood picture as suspicious of pernicious anemia; all methods tried during the next few years to check the serious gastro-intestinal upsets and improve the anemia were complete failures; finally Dr. Soper was consulted and his complete gastro-intestinal examination showed a very marked gastric hyposecretion on numerous tests and no other abnormality. This patient immediately reacted to 25 drop dosage of HCl after each meal and has remained well ever since. Every attempt to discontinue the medication during the past eight and a half years has been followed by a recurrence of symptoms and therefore, as patient is really intelligent, a re-

turn to medication. Patient's color is now exceptionally good and he looks, feels and acts like a very vigorous man of his years. The following gastric analyses are through courtesy of Dr. Soper, while I personally made the blood count:

ANALYSES

1917	2 examinations, no free HCl	totals 3 and 6
1919	no free HCl	total 14
1920	fractional no free HCl	except at 45 minutes free HCl 12.
10-12-24	r.b.c. 5,300,000	hb. Talquist estimate 90%

Case 13. F. B. B., a rather slightly built physician of 45, on noting my argument in the medical literature, consulted me exclusively by correspondence, starting August, 1923. He gave the following clear-cut and intelligent history of his physical troubles: that he had never been of a ruddy type nor had a really good digestion; that about ten years previously a number of tests had shown a very low gastric acidity, without any free HCl; that he then had excessive indican in the urine, which would not disappear even on a meat free diet; that on account of the contradictions among his consultants and in the literature he had never taken HCl more than passively; that he had about reconciled himself to his indifferent digestion and poor color, when about a year before consulting me definite persistent paresthesias appeared in his arms and legs without apparent cause; that these were extremely annoying inasmuch as they interfered seriously both with his golf and his surgical work; furthermore, these paresthesias naturally put him to thinking most seriously because he remembered that his father had complained of the same symptoms for years before he was definitely diagnosed pernicious anemia; that in retrospect his father, too, had evidently been a long time sufferer from diminished gastric secretion, though it was never diagnosed nor treated on an average downhill course to exitus. Which, incidentally, is the only hereditary or familial equation in this series. This intelligent physician experimented with his personal dosage for a while; refreshed my memory as to the sense of burning and eventually diarrhea from overdosage; and finally settled on 60 drops HCl sipped leisurely after each meal. He states that he has almost come to enjoy the drops during the year's continuous use. Except following some major indiscretion in diet he states his paresthesias are practically gone, that his wife and even outsiders comment on his improved color and that all in all he feels like a new man. All of which evidence could probably have been made more conclusive by a fitting period of watchful waiting, but both patient and myself are more interested in therapeutics than in experimental pathology.

Which reports explain to my personal satisfaction at least the type of cases (which are selected from a large series) to prove the efficacy of the previously published treatments for pernicious anemia. I agree without quibbling that these cases are genuine, but argue that all cases heretofore cured belong, except for the acute exacerbation, to this mild type. My explanation for the improvements reported in the literature is that either the stomach resumes part of its function or sufficient foods acidulated by organic or hydrochloric acid have been given to keep enough patients alive out of a large series for selective report purposes.

SUMMARY

A brief of the evidence is submitted on the basis of which it is maintained that all pernicious anemia cases personally directed have reacted to date in practice fully as well as could reasonably have been anticipated from the author's "Working Hypothesis As To The Cause And Cure Of Pernicious Anemia" published in the December, 1922, issue of the *Jour. Mo. State Med. Ass'n*.

SPECIFICALLY

1. The maximum amount of dilute hydrochloric acid taken after meals without discomfort at a single dose in a half glass of water was 30 drops, the minimum 15 drops, but these doses could be repeated at half hour intervals for a total of 3 to 5 doses after each meal without any complaint, depending on the size and character of the meal.

2. This relatively intensive acid treatment (the qualifying relative is used because it actually takes over 20 drops dilute HCl to make a glassful of ordinary milk acid in reaction) immediately improved the digestion of all non-moribund cases in this series, and progressively improved the blood picture and all other minor signs and symptoms.

3. Both clinical and postmortem evidence is presented to sustain the author's *a priori* conception that arsenicals are not only not necessary in pernicious anemia, but as used in practice actually injure the patient's prospects.

4. A modified acid treatment is suggested in certain gastro-intestinal disturbances and in typical pseudo-pernicious anemia cases.

CONCLUSION

In view of the eventual failure of all other treatments, practitioners should now determine definitely whether the clinical results obtained in this small but consecutive and complete series were due to a chance coincidence, or whether there is in reality a cause and effect relationship between the exclusive intensive hydrochloric acid treatment of pernicious anemia and the marked remissions, which to date have invariably persisted for as long as the treatment has been faithfully and intelligently carried out.

Wall Building.

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[The following paper by Dr. Wm. D. Davis was published in our March issue, but a number of lines of type were misplaced in a certain portion and these misplaced lines were so far removed from their proper position, that the reader was hopelessly confused and could not read the text intelligently. For this reason we are reprinting the entire paper. Ed.]

COMMON WARTS OF THE MOUTH

REPORT OF TWO CASES

WILLIAM D. DAVIS, M.D.

ST. LOUIS

Common warts of the mouth, verrucae vulgares, do not occur as commonly as do warts on other parts of the body. Cases have been reported by Heidingsfeld,¹ Pusey,² Sir Henry Bultin³ and others; while Hartzell,⁴ Knowles,⁵ Stelwagon,⁶ Blair,⁷ and the George Blumer edition of Forcheimer's *Therapeusis of Internal Diseases*⁸ states that warts occur on the mucous membrane of the tongue and lips, the Forcheimer's *Therapeusis* stating that they occur most frequently on the hands, but are more rarely met with on the lips and inside the mouth and nose.

In Heidingsfeld's case there were warts (condyloma acuminata linguae) on the tongue with corresponding lesions on the labia majora; while in Pusey's case there was a verruca vulgaris on the tip of a man's tongue that had existed for six years. Butler reports two cases, the first, a very unusual case at St. Bartholomew's Hospital, occurring in a boy who had a warty enlargement of all the fungiform papillae of his tongue. The other case, at the Hospital for Sick Children, occurred in an infant 10 months old who had a wart on the under aspect of the tongue, to the left of the frenum, in the groove between the tongue and the floor of the mouth. Butlin further states that "warts occurring on the tongue are most frequent on the dorsum, within the papillary area, and are then doubtless due to hypertrophy of the natural papillae; but they are not limited to the papillary area and may grow on the under aspect where the mucous membrane is quite smooth. They may occur at any age and are not uncommonly congenital. Warts developing on a chronic leucoplakia or chronic superficial glossitis almost invariably becomes cancerous. Warts within the mouth resemble warts on other parts of the body; but on the lip they may develop true horn."

Blair states that "warts are not uncommon in the mouth, occurring upon the dorsum of the tongue, although they may grow on the under surface of the tongue, on the lips, or on the inner surface of the cheeks. They are usually single, but may be multiple. Warts are local epithelial proliferations that grow toward the surface and remain superficial to the basal

membrane, which distinguishes them from malignant epithelioma in which the multiplying cells break through the basement membrane and invade the deeper tissues."

The common wart (*verruca vulgaris*) is the type most frequently seen in the mouth, and the two cases reported in this paper were of that variety.

Much work has been done by various men in trying to isolate a definite, causative agent for warts; but as yet this has not been accomplished, although most men believe that warts are contagious and are due to a specific causative agent.

Wile and Kingery⁹ proved that warts can be developed from the filtered material; while Kingery¹⁰ went further and was able to produce warts in the second generation, the incubation period being about six months which was longer than those produced in the first generation. In conclusion Kingery states: "It would rather seem from the clinical and experimental evidences of contagion and experiments described herein, that in the production of ordinary warts there must be an infectious agent that is specific, that does not thrive on ordinary cultural medium, and that is at the same time capable of passing through the finest filtering apparatus obtainable."

Morrow, Allen and Bronson¹¹ noted the spread of warts by contiguity, spreading from one member of a family to another. Jadaschon¹² was able to reproduce warts by inoculation; thirty-one inoculations were successful out of seventy-four, six individuals being used for the experiments. Kuhnemann¹³ discovered a bacillus with which he was able to produce suggestive lesions experimentally in rabbits. Blosser¹⁴ states that the cause of warts is unknown, but that they are inoculable either to another part of the body or to another person. Lipschütz¹⁵ describes his cytologic findings in beginning warts. He believes that the inclusions in the nuclei of certain cells are due to chlamydozoa. Bonjour¹⁶ believes that warts are due to psychic causes. He states that he cured them by suggestion within one to five weeks.

The observations and findings of most of these men would most certainly seem to favor a definite, specific causative agent for warts, and undoubtedly in time this will be isolated.

The pathology of common warts reveals a hyperkeratosis, acanthosis of the rete, with downward extension and some branching of the rete pegs and an increased vascularity of the interpapillary bodies.

The treatment of common warts of the mouth is the same as that for common warts elsewhere, with some exceptions owing to the location. There are many methods of treat-

ment, both internal and local, and one has to choose the method that is best suited to the individual case, considering the location and characteristics of the wart or warts. Galvano-cautery, fulguration, electrolysis, excision, ligation, and various escharotics; the internal and intravenous use of various drugs, such as mercury, arsenic, etc., X-ray, radium, the Kro-



Fig. 1. Case 2. Verrucae on the mucous membrane of the lips. (From the Dermatological Department of St. Louis University.)

mayer lamp and other lights, have been used successfully in the treatment of warts. Where warts are extensive in the mouth one should choose a means by which there will not be too much denuding of the mucous membrane; in the second of these cases trichloroacetic acid was used locally. Linday¹⁷ reports a case of verrucae of the scalp treated successfully by the intravenous use of neoarsphenamin. Blendermann¹⁸ in treating warts disinfects them first with tincture of iodine, freezes them with ethyl chlorid, and removes them with a sharp curette. The method is considered painless; the scar is insignificant.

Of the two cases presented, one was a single verruca of the tongue; the other had an enormous number of verrucae in the mouth.

REPORT OF CASES

Case 1. G. B., a white male, aged 45, married, was first seen in July, 1923. He gave a negative family history and his past history elicited nothing of consequence. He has been an habitual pipe-smoker nearly all his life. The physical examination revealed nothing of importance except that he has a very bad pyorrhea with several decayed teeth.

The present condition started as a small rough spot on the tip of his tongue four years ago, gradually increasing to the size of a large pea. The lesion is rather firmly imbedded in the tongue, is of a dirty slate color and is distinctly verrucous in character. The patient stated that he constantly rubbed his tongue against his teeth and was afraid that a cancer would develop.

The lesion was excised and the base destroyed by galvano-cautery. The pathological examination showed the specimen to be that of a typical verruca vulgaris, with hypertrophy of the horny layer, acanthosis, and an elongation of the papillae.

Case 2. A colored female, aged 10, well nourished, clean, and of a fairly intelligent negro family, gives a negative family history except that two brothers died of influenza during the epidemic following the war.

The child is the youngest of ten children and gives a past history of having the usual childhood diseases: influenza four years ago; the thrush (mycotic stomatitis) three years ago, with history of having made a good recovery. She had intermittent attacks of acute tonsillitis.

The general physical examination revealed nothing of importance except that she has enlarged tonsils. The Wassermann reaction was negative. The patient complains of pain on mastication, particularly of acid foods, and states that the present trouble started two years ago (while the family were living in Arkansas), first as a small "rough spot" on the mucous surface of the lower lip, and within a period of two weeks many other similar lesions made their appearance in the mouth. They gradually increased in number until the time that she first came to the clinic. Examination revealed very many grayish-white, raised verrucous-like lesions, ranging in size from that of a pinhead to a large pea, and located on the vermilion and mucous surfaces of both lips, the inner and outer surfaces of both upper and lower gums, inside of both cheeks, the dorsum of the tongue, and the hard and soft palate. There were over one hundred lesions in this patient's mouth; they were rather firm to the touch and, owing to the color and multiplicity of the lesions, lymphangiomata were suspected but the lesions, as stated, were distinctly verrucous-like and did not yield any fluid on puncturing.

The pathological examination confirmed the diagnosis of simple verrucae, as there was hypertrophy of the horny layer with acanthosis of the rete and an elongation of the papillae with increased vascularity of the interpapillary bodies.

It seems to the writer that the mouth in this case offered a suitable means for the spread of the warts by continuity, first starting as the "mother wart" on the mucous surface of the lower lip and spreading until the whole mouth was involved.

Owing to the great number of warts present, the question of treatment arose and the various local measures were considered, e. g., galvano-cautery, electrolysis, and the use of some escharotic. It was decided to use trichloroacetic acid. The lesions were first wiped dry with cotton and the acid applied to each individual wart. This was repeated twice weekly, and at the end of eight weeks all lesions had entirely disappeared.

745 Missouri Building.

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ACTION OF PITUITARY EXTRACT ON THE UTERUS

The action of pituitary extract on the uterus, M. Pierce Rucker, Richmond, Va., (*Journal A. M. A.*, Nov. 21, 1925), shows, it quite characteristic. It never gives contractions with periods of rest between, but always a continuous series of contractions with increase in intra-uterine pressure. This action was illustrated in a case of inevitable abortion in which labor was induced in the fourth month with a number 3 Voorhees bag. The patient was given one-fourth grain (0.0162 gm.) of morphin and 1/150 grain of atrophin at 1:30 p. m. At 8:00 p. m. she was having painless contractions of the uterus that averaged 10 mm. of mercury at intervals of two minutes. She was given 5 minims (0.3 c.c.) of pituitary extract subcutaneously. Five minutes later, there was a characteristic pituitary extract action. The contractions increased in height only very slightly but were continuous one after another, without any period of rest. Twenty-two minutes elapsed before there was the slightest pause between contractions. The intra-uterine pressure was increased 6 mm. of mercury. The patient still felt no pain. In other words, here was a dose so small (considering the stage of pregnancy) that it caused no action clinically, and yet it produced an incomplete tetanus of the uterus.

BASAL CEREBRAL HEMORRHAGE

Maurice Packard and Edwin G. Zabriskie, New York (*Journal A. M. A.*, Nov. 21, 1925), report four cases of basal cerebral hemorrhage in which the diagnosis was made before death. It is stated that the presence of persistent blood in the spinal fluid, hemolyzed red blood cells and variability of color from bright red to yellowish tinged, without clot or large amounts of albumin, should always arouse the suspicion of cerebral hemorrhage at the base. It is possible that hemorrhage into the ventricles from eroded vessels of a tumor may confuse one in making a decision; but in the latter case the blood-tinged fluid appeared late in the course of the disease, whereas in the former it invariably appears early, persists throughout, and remains bright red as long as leakage occurs. If the flow ceases or in some way becomes temporarily walled off, the color changes to yellow, or may eventually become entirely clear, only to become red again when the accession of fresh blood begins.

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APRIL, 1926

EDITORIALS

RECOMMENDS REVOCATION OF MEDICAL SCHOOL CHARTERS

In his report filed with the Supreme Court on March 6, Special Commissioner Edwin J. Bean recommended that the charters of the St. Louis College of Physicians and Surgeons and of the Kansas City College of Medicine and Surgery, both of which were repeatedly mentioned in the exposure of the medical diploma mills, be revoked.

It will be recalled that last July the Honorable Robert W. Otto, then Attorney-General, now a Judge of the Supreme Court, brought suit in the Supreme Court against the colleges named for violation of their charters. The Supreme Court appointed Mr. Bean as Special Commissioner to take testimony in the case and report back to the court. After a lengthy hearing beginning last November at St. Louis and at Kansas City, in which many witnesses were heard, Commissioner Bean sustained practically all the allegations made by the Attorney-General. It appears from the report that Dr. Briggs, dean and owner of the St. Louis College of Physicians and Surgeons, and Dr. Adcox, the chief solicitor of students for the Briggs school, became acquainted in 1915-1916 when the St. Louis College of Physicians and Surgeons was merged with the National University of Arts and Sciences, and that they entered into an agreement whereby Adcox was to solicit students for the P. & S. and receive in payment one-half of the tuition obtained from each student.

The report states that Dr. Adcox procured, with the knowledge of Dr. Briggs, "false and fraudulent certificates as to the preliminary qualifications of students," and that such certificates were accepted by Dr. Briggs and the students admitted to the college when they were not entitled to such admission under the school's professed regulations. Among the examples cited in the report of diplomas fraudulently issued are the following: Andrew Draser, of California, who is said to have paid \$600 to Drs. Adcox and Briggs in 1922 for advanced standing, attended the school for a year and obtained a diploma; and Harry J. O'Connor, of Chicago, who never attended the col-

lege, but was enrolled upon its books and received a diploma in 1922 or 1923.

In recommending forfeiture of the charter of the Kansas City College of Medicine and Surgery, Commissioner Bean said "it was stated and admitted that the college had sold and issued 50 or 60 diplomas at a minimum price of \$200 each to persons who had not attended the school or taken examinations there."

Among the witnesses at the hearings were Dr. F. C. Waite, of the Western Reserve Medical School Cleveland, O., who inspected the schools in conjunction with the State Board of Health, Dr. Emmett P. North, President of the State Medical Association, and Dr. Robert Adcox. The latter made a complete confession of all his dealings with Dr. Briggs in providing false credentials for prospective students and of his financial arrangement with Dr. Briggs. Whatever sums, he said, were obtained from students for tuition were split fifty-fifty between him and Dr. Briggs. Asked if there was any standard rate for tuition, Dr. Briggs said no, that the student was charged whatever he could afford to pay. If he wanted a diploma in a short time the rate was correspondingly higher than if he was willing to wait a year or so.

It is expected that the colleges will file exceptions to the report which will pave the way for the presentation of oral and written arguments to the Supreme Court next May.

COURT DISSOLVES HORTON INJUNCTION

Just as we are going to press, we learn that the Cole County Circuit Court has dissolved the temporary injunction granted Dr. R. B. Horton, of Purdy, Missouri, about six months ago, preventing the state board of health from proceeding with the trial to revoke Horton's license. Horton had been cited to appear before the state board of health on the charge that he had made false and fraudulent statements concerning his premedical and medical education.

The state board of health may not continue its proceedings against Horton, and we hope that the board will do so immediately. According to press dispatches, Dr. James Stewart, secretary of the board, said the board would take up the case against Horton but that no date had been set for the hearing.

SIXTY-NINTH ANNUAL MEETING AT ST. LOUIS

MAY 18, 19, 20

The program for the 69th Annual Meeting of the Association to be held at St. Louis, May 18, 19, 20, is rapidly approaching completion. In another column in this issue we publish the preliminary program.

The House of Delegates will hold its first session on Monday, May 17, one day in advance of the regular scientific proceedings. This arrangement affords the House ample time to deliberate upon the questions that come before it and prepare for its final session on Wednesday, May 19. The Council will hold its session on Monday, May 17, immediately after the noon recess of the House of Delegates.

For the scientific work, the program committee has arranged for clinics to be held at several of the hospitals for clinics on general surgery and specialties, and for diagnostic clinics to be conducted at the general meeting place in the Auditorium of the St. Louis University, 3642 Lindell Blvd. In the afternoons, papers on scientific subjects will be read and discussed. These will include a symposium on obstetrics and a symposium on chronic nephritis. The diagnostic clinics will include demonstrations of diseases of the chest and diseases of the heart.

Dr. John A. Witherspoon, Nashville, Tenn., a former president of the American Medical Association, has accepted an invitation to deliver an address before our meeting and conduct one of the diagnostic clinics, and Dr. Olim West, Secretary of the American Medical Association, has been invited to be with us and give us an address.

All meetings, except the clinics at the hospitals, will be held in the Auditorium of the St. Louis University, which is splendidly arranged for our purpose. The seating capacity is about 1200 and there are ample arrangements for showing pictures on the screen and for holding the diagnostic clinics. The exhibits will be placed in a room on the same floor as the auditorium.

The interest in this meeting manifested by the members throughout the state indicates that we shall have a large attendance.

REDUCED RATES FOR THE STATE ASSOCIATION MEDICAL MEETING AND FOR THE AMERICAN MEDICAL MEETING

Application has been made for a reduction in a round trip railroad rate to St. Louis on the occasion of our annual meeting, May 17, 18, 19, and 20. If granted, this rate will be on the certificate plan, which requires an attendance of at least 250 paid fares. Of course we expect an attendance of 800 at the St. Louis session so we should not have any trouble securing this reduction of rate. When purchasing your ticket to St. Louis, you must ask the ticket agent to give you a certificate (not a receipt). This certificate must be deposited at the registration desk to be endorsed so the return fare can be purchased at the reduced rate. Of

course, the going ticket will cost the regular amount of the fare.

Members who expect to attend the A.M.A. at Dallas, April 19, will be entitled to a reduced rate of one-half fare on the return ticket. In order to obtain this rate, however, members must obtain a certificate from the ticket agent when they purchase their ticket to Dallas. Be sure and ask for a CERTIFICATE (not a receipt). When you arrive in Dallas, you must deposit it with the Secretary of the Association who will endorse it and return it to you before you are ready to purchase your return ticket. Return tickets must read over the same road that you used in going.

HOTELS AND RATES FOR ST. LOUIS MEETING, MAY 18, 19, 20

All the hotels listed below are members of the Convention Bureau of St. Louis and the rates published here are the usual rates, with some reductions where there are several persons in a room. In making your reservations, please indicate the kind of room you want and how many people will occupy it with you; also inform the hotel on what day you expect to arrive, and make your reservations direct with the hotel. The Melbourne Hotel will be the headquarters.

HOTEL RATES			
Name and Address	Without Bath	With Bath	
American, 7th and Market Sgle. Dble.		\$2.50 to 4.00 to	\$4.00 5.00
American Annex, 6th and Market Sgle. Dble.		2.50 to 4.00 to	4.00 5.00
Buckingham, Kingshighway & W. Pine Blvd. Sgle. Dble.	\$2.00	4.00 5.00	
Chase, Kingshighway and Lindell Suite with 4 persons		2.00 each 4.00 to	6.00 8.00
Claridge, 18th and Locust Sgle. Dble.		2.50 to 4.00 to	3.50 5.00
Coronado, Spring & Lindell Sgle. Dble.		2.50 and up 5.00 and up	
Forest Park, West Pine and Euclid Sgle. Dble.		3.00 per person 3.00 to	8.00 10.00
Jefferson, 12th and Locust Sgle. Dble.	2.50 4.00	5.00 to 2.50 each	
Majestic, 200 N. 11th St. Sgle. Dble.		4.00 to 2.00	5.00
Marquette, 18th and Washington Sgle. Dble.	2.00 to 3.00 to	3.00 to 4.00 and up	3.50
Maryland, 9th and Pine Sts. Sgle. Dble.	2.00 3.00 to 3.50	3.00 to 4.00 to	3.50 5.00
Mayfair, 8th and St. Charles Sgle. Dble.		3.00 to 4.50 to	6.00 8.00
Melbourne, Grand and Lindell Sgle. Dble.		3.00 to 4.50 to	5.00 8.00
(Headquarters) Statler, 9th and Washington Sgle. Dble.		3.00 to 6.00 to	7.00 9.00
Warwick, 15th and Locust Sgle. Dble.		2.00 to 4.00 to	3.50 5.00
	Room with 3 persons	2.00 per person	

"TRANQUILITY"—A HOME FOR AGED AND INCAPACITATED PHYSICIANS

A nation-wide campaign has been started for the raising of an endowment fund to pur-

chase a national home for aged and incapacitated physicians. Dr. Robert Tuttle Morris, New York, is chairman of the campaign, which is being conducted by the Physicians' Home, Inc., and Hon. George Gordon Battle has been elected national chairman. The plan is to raise the sum of \$3,000,000, the work to be arranged through four conferences or units—the Eastern Conference, centering in Boston and New York, and including the New England States; the Middle-West Conference, centering in Chicago; the Pacific Coast Conference, centering in San Francisco; and the Southern Conference which will be later established with Richmond, Va., as the organization point. Downsbury Manor, the estate of the late Colonel Edward M. Knox, at Ridgefield, Conn., has been chosen for such a home, and \$125,000 is required for the purchase.

This beautiful estate, which has been renamed "Tranquility," is situated at the top of a hill in the midst of 350 acres of countryside. Almost every conceivable feature conducive to the health and well-being of disabled physicians is combined in this charming home. Its location is ideal. Some of the appealing features are the Italian garden, in which is a central pool designed in marble and pieces of sculpture, which is reached through a winding woodland and which faces the main entrance to the manor; the delightful rose garden to the rear; several trout streams; bridle paths, rustic walks and retreats; rock gardens; macadam drives. The manor house itself contains 50 rooms, together with 14 other buildings scattered amongst well laid out and productive farm acres. The manor is a combination of stone and shingle, built so as to give surprising vistas along porches and over the countryside. From a tower in the woods the whole estate may be viewed in panorama, four states being discernible on clear days—Connecticut, New York, Massachusetts and Vermont. The estate is furnished with all the appurtenances of a farm with housings for cattle, dairy, poultry, garage, and houses apart for the help.

With very little change, it is expected the manor will house easily several hundred old doctors and their dependents.

The Physicians' Home, Inc., is not an experiment in any sense. A trial unit at Caneadea, N. Y., has been maintained for the past four years. The waiting list and the call for similar units for other states have led to this nation-wide appeal.

The American Medical Association, as well as our own House of Delegates, have had this question up for discussion at various times, but the impracticability of such a project, if supported by the medical profession alone, was

clear. Although there are many medical men of means who are eager to help this movement to the utmost in a financial way, still that is not enough. To insure the upkeep of such a home for years to come we must look to laymen for their endorsement and financial co-operation. The public will respond if prominent physicians will sponsor the movement. The appeal will be carried to the people, and of course men of large wealth will be asked to subscribe. This, however, will be done through intimate contact. The movement is not in any sense a "drive," and in all probability it will take a year or more to put over a campaign that will be in keeping with the dignity of the medical profession.

Checks should be drawn to the order of The Physicians' Home, Inc., and forwarded to Dr. Albert G. Weed, National Treasurer, 22d floor, Times Building, 42d Street and Broadway, New York City.

IMPORTANT PAPER BY DR. WAITE IN THIS ISSUE

Members will be much interested in the paper by Dr. F. C. Waite, Western Reserve Medical School, Cleveland, Ohio, in this issue* under the title "Some Types of Fraudulent Medical Diplomas and the Use Made of Them." This paper was read by Dr. Waite at the annual Congress on Medical Education, Medical Licensure and Hospitals under the auspices of the American Medical Association held in Chicago, February 15-18.

LET IT ALONE

Physicians in St. Louis and probably those in other parts of the state have received letters recently from the Wrigley Pharmaceutical Company, Atlantic City, New Jersey, offering stock in the concern at \$10 for 10 shares and \$6 worth of "Spearmint" tooth paste which the company is said to manufacture. Concerning this scheme, the Better Business Bureau of St. Louis has issued the following warning:

Thousands of letters are being mailed to St. Louis investors by the Wrigley Pharmaceutical Company, 2035 Boardwalk, Atlantic City, N. J.

Inquiries received at the office of the Better Business Bureau indicate that there is confusion in the minds of the public between this company and the Wm. Wrigley, Jr., Co., manufacturers of Wrigley's Spearmint Chewing Gum.

The possibility of this confusion is apparent to those who have studied the literature of the Wrigley Pharmaceutical Company. The president of the Wrigley Pharmaceutical Co. is W. W. Wrigley, but this gentleman is in no way connected with or related to Wm. Wrigley, Jr., the president of the chewing gum company.

*See page 121.

The manufacturer of "Spear-mint" tooth paste is in no way allied with the manufacturer of "Spear-mint" chewing gum. The Wrigley Pharmaceutical Co. of Atlantic City is in no way connected with the Wm. Wrigley, Jr., Co., of Chicago.

A wire sent by the Better Business Bureau, of St. Louis, to the Wm. Wrigley, Jr., Co., of Chicago, brought the following response:

"Neither this company nor any of its officers has any connection in any shape, manner or form whatsoever with the Wrigley Pharmaceutical Co., of Atlantic City."

In view of this potential confusion and because of the fact that the company has no license in the state of Missouri to sell this stock, the Honorable F. T. Stockard, Commissioner of Securities, under the provisions of the Missouri Securities Act (Blue Sky Law) has issued a warning to the public.

The theory of security selling is that the maximum amount of the selling price of the stock should go into the company's treasury in order to provide the maximum working capital for the company. If this stock is sold at par and in addition six dollars worth of the company's product is given gratis, then the stock purchased at a par value of \$10 would seem to immediately have a book value of less than the amount paid.

Investors should not get the impression that they are receiving the tooth paste free of charge. Actually the \$10 remitted pays for the cost of the tooth paste and for the stock.

SHALL THE OFFICE OF CORONER BE ABOLISHED?

Coroners are ancient officers by the common law, so called because they dealt principally with the pleas of the crown, and were of old time the principal conservators of the peace within their county. In modern times they are county or municipal officers whose main duty is to hold inquests on bodies of those who are supposed to have died violent deaths, with the additional ministerial duty, in many cases, of acting as a substitute of the sheriff in case of his incapacity to act, and in some jurisdictions they continue to be conservators of the peace.

In ancient times it was necessary that the coroner be a knight possessing sufficient means to answer to all manner of people. In the United States no such qualification exists but most of the states require from the coroner an official bond.

For a long time the principal judicial function of the coroner, and the one which virtually characterizes his office in modern times, both in England and America, is that of investigating sudden, violent and unnatural deaths. The object of a coroner's inquest is to ascertain the cause of death and to obtain and secure evidence in case of death by violence or other undue means, and is one step taken in the enforcement of the criminal laws of the land. An inquest is essentially a criminal proceeding, at least from the time the felonious homicide is established.

The inquest, to be valid, must be held *super visum corporis*, that is, the coroner and

jury must have a view of the body. A coroner may order an autopsy to be made when in his judgment that is the appropriate means of ascertaining the cause of a person's death. In such cases he may employ an expert to examine the body.

The office of coroner is provided for by the Constitution of Missouri. They shall hold office for four years and until their successors are duly elected and qualified, unless sooner removed for malfeasance in office, and are not eligible for more than one term in any one period.

Their function as a conservator of the peace has grown into virtual disuse in this country, while the function of inquiring into the cause of violent and casual deaths has become the most important in its relation to our system of complex governmental procedure. This being true, the recent report of the Missouri Association for Criminal Justice made by its committee dealing with the office of coroner is both wise and timely.

The committee made its report at a meeting of the St. Louis Medical Society on February 16, to which a large number of lawyers, judges and others interested in the improvement of criminal justice were invited. The committee reported that the methods employed by coroners in many counties of Missouri are so loose and inefficient as to be of little assistance in the investigation of crime and that autopsies outside of St. Louis and some of the large centers are the exception rather than the rule.

The committee recommended the following changes in the office of Coroner:

1. Creation of a medical examiner for each county to ascertain causes of death.
 2. Abolition of the Coroner's jury.
 3. Ultimate abolition of the office of Coroner and substitution of a medical examiner.
 4. Increased fees and larger fixed compensation for Coroners.
 5. Establishment of the office of State Pathologist, to be appointed by the Governor for a long term and at adequate compensation.
- Any change which would strengthen the power and add to the efficiency of the inquiry into the cause of violent and causal deaths and thereby render more reliable and efficient assistance in the apprehension and prosecution of those responsible for unlawful homicides should and will be welcomed by all good and progressive citizens, both lay and professional.

NEWS NOTES

The Western Physiotherapy Association will hold its eighth annual meeting at Kansas City, April 15 and 16. Dr. A. David Willmoth, Louisville, Ky., is president.

The Missouri Hospital Association will hold its Annual Meeting in St. Louis, on May 17. Dr. B. A. Wilkes, Superintendent of the Missouri Baptist Sanitarium, St. Louis, is in charge of the arrangements for the meeting.

Dr. H. I. Spector, St. Louis, announces that he has resigned his position as Tuberculosis Controller of St. Louis and hereafter will devote all his time to private practice with offices in the University Club Building.

Dr. Samuel A. Murray, Holden, Mo., was nominated for mayor of Holden on the Citizens' ticket. He is a native of Holden and served in the World War. Dr. Murray is a member of the Johnson County Medical Society and a Fellow of the American Medical Association.

On February 5 the annual banquet of the Kansas City Academy of Medicine was held at the Mission Hills Country Club. The attendance was the largest in the history of the Academy. The guest of honor and speaker of the evening was Dr. J. J. Macleod, Professor of Physiology, University of Toronto, in whose laboratories, Doctors Banting and Best made their remarkable discoveries of insulin.

At a special session of the Missouri conference of the Methodist Episcopal church which met in St. Joseph March 9, plans were made to raise \$300,000 for the Missouri Methodist hospital in St. Joseph. The campaign will extend over a period of three years, the churches of St. Joseph raising \$50,000 annually and the conference churches outside of St. Joseph raising a like sum.

The American Board of Otolaryngology has arranged for two examinations during the month of April as follows: St. Paul's Sanitarium, Dallas, Texas, Monday, April 19. Stanford University Medical School, Clay and Webster Streets, San Francisco, California, Tuesday, April 27. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Mo.

There is an opening in a town of 6,000 in central Missouri for a young practitioner who would enter into partnership with an established surgeon in a private hospital. The applicant would be expected to do private practice in general medicine as well as assist in the surgical work, with the prospect of taking full charge. Address the Secretary of the Association for further information.

Dr. H. E. Pearse, Health Director of Kansas

City, has issued orders against the distribution of patent medicines in Kansas City without a permit. The city ordinance prohibits the free distribution of drugs or medicines in any form without a permit from the health director. Dr. Pearse said he had received several complaints about drugs and medicines being thrown promiscuously in the residential section and declared that he would require a strict enforcement of the ordinance against such distribution.

Dr. John L. Tierney, St. Louis, addressed the guests at a banquet given in honor of the Dane County (Wis.) Medical Society by the Sisters of St. Mary in conjunction with the dedication of the new hospital at Madison, Wisconsin, on January 11. On February 5 Doctor Tierney addressed the St. Clair County (Ill.) Medical Society at Edwardsville. The title of his paper was "Working Up a Case," and on March 18 he held a clinic and gave an address before the Garfield County (Okla.) Medical Society at Enid, Okla. The title of the address was "Diagnosis of Diseases of the Ductless Glands."

The Mid-West State Hospital Association held its Third Semi-Annual Conference at Hastings, Neb., October 13-14, 1925. The following members from Missouri were present: Col. W. P. Fulkerson, President, State Eleemosynary Board; Dr. George A. Johns, Health Supervisor; Dr. M. O. Biggs, Superintendent, State Hospital No. 1, Fulton; Dr. E. F. Hctor, Superintendent, Missouri State School for the Feeble-Minded, Marshall; Dr. W. J. Bryan, Superintendent, State Sanitarium, Mt. Vernon; Dr. J. H. Parker, Superintendent, State Hospital No. 2, St. Joseph; Dr. J. W. Bruton, Superintendent, State Hospital No. 3, Nevada. Col. Fulkerson and Dr. Johns read papers.

An evening that will be of intense interest to the profession in general is that of the meeting of the St. Louis Medical Society on the evening of Tuesday, April 27, when the Trudeau Club presents a series of papers which will personate the modern and outstanding thought of today in the broad field of tuberculosis.

Looking over the subjects of the papers to be read, one must be impressed by their great importance to the profession as a whole: "The Diagnosis of Concealed Tuberculosis," by Dr. A. C. Bedal. "The Treatment of Concealed Tuberculosis," by Dr. A. B. Day. "Heliotherapy in the Treatment of Pulmonary Tuberculosis," by Dr. Elmer Richman. "Thoracoplasty in the Treatment of Pulmonary Tuberculosis," by Dr. Evarts A. Graham. "The

Diagnosis and Treatment of Gastro-Intestinal Tuberculosis," by Dr. J. W. Larimore.

Every physician interested is invited to be present.

Dr. Arthur Schüller, Consulting Cranial Roentgenologist to the Central Roentgen Institute of the General Hospital at Vienna and an eminent neurologist, will give a four-hour course upon the "Interpretation of Roentgenograms of the Skull," to a limited class at a fee of sixteen dollars each.

The lectures will be from 8 to 10 a. m., Wednesday and Thursday, April 28 and 29, at the President Hotel, 14th and Baltimore, Kansas City, Mo. The course will be in English.

Dr. Schüller will address the Jackson County Medical Society Tuesday, April 27 at 8 p. m.

The outline of Professor Schüller's course on the X-ray diagnosis of diseases of the head follows:

1. Variations of the form of the skull.
2. Variations of the structure of the skull.
3. Tumors and diseases of the brain.
4. Diseases of the eye and orbit.
5. Diseases of the paranasal sinuses.
6. Diseases of the mastoids and the petrous pyramids.

Dr. Schüller is the author of numerous publications on cranial roentgenology. It was under his direction and at his suggestion that Hirsch developed the transsphenoidal pituitary operation. The same applies to Naito's monumental work on the hyperostoses of the skull and to Goalwin's work on the optic canal.

Your registration for Dr. Schüller's course through Dr. E. H. Skinner, 1020 Rialto Building, Kansas City, Mo., must be accompanied by check for sixteen dollars.

Dr. B. A. Wilkes who has been connected with the Missouri Baptist Sanitarium for the past thirty years and who five years ago on February 5, was called to accept the superintendency of the hospital for the second time, was beautifully entertained by a banquet given in his honor on the anniversary of his return.

The heads of all the departments of the hospital and all employes having served five years or more, forty-seven in number, were present to honor their chief executive on this anniversary occasion.

The banquet was held in the Officers' dining room which was artistically decorated for the occasion. Mrs. C. Dunaway, the stewardess, had charge of the banquet and the dinner was pronounced par excellent by everyone who indulged. Mr. J. O. Steel, the cashier, and Miss Ruth Welton, the assistant dietitian, displayed their musical talent by rendering several good

vocal and piano selections. Dr. S. E. Ewing served as toastmaster and his remarks added much to the merriment and joviality of the program.

The speakers of the evening were Mr. Charles P. Senter, President of the Board, and Dr. Hudson Talbott, member of the Medical Staff, both being very expressive of good fellowship and cooperation.

Mr. Frank Horsley known by the institution as the "pioneer," who has served the hospital in many different capacities for more than thirty years, made a very appropriate talk about the hospital of the present day as compared to it thirty years ago.

The honored Chief favored the guests with a response which expressed his appreciation for the loyalty shown him through his co-workers and his gratefulness for the organization which had made this occasion possible.

OBITUARY

CHARLES EDGAR WILSON, M.D.

Dr. Charles Edgar Wilson was born November 25, 1864, in Butler County, Iowa. He died January 28, 1926, at Kansas City, Missouri.

He was graduated from the Wentworth Military Academy, and the degree of M.D. was conferred upon him by the Kansas City Medical College, in 1889. He was made Physician and Surgeon to the Fire Relief Association in 1902, and served in that capacity until the time of his death.

It was little known by his friends that his pet charity was the Kansas City Blind Association, of which he was vice-president, and to which organization he gave many hours of gratuitous service.

Dr. Wilson was a veteran of the Spanish-American War, and voluntarily served for two years in the World War, which service he could easily have evaded had he chosen to ask exemption.

He was a direct descendant of that old Virginian family which furnished a recent president of the United States, which lineage, perhaps, contributed to his simple refinement and characteristic poise. To know Charley Wilson, as he was familiarly known by his friends, was to respect and love him. He was always found engaged in those things that call for an exhibition of a militant manhood in civic, professional, and national enterprises.

The following extract from an editorial appearing in the *Kansas City Journal-Post* gives a concise resume of Dr. Wilson's character as it was estimated by a layman:

"He was a good man unaware of his good-

ness, a man who did his duty to the letter with no hint of self-righteousness. He possessed skill unspoiled by vanity and a capacity for friendship unencumbered by sentimentality. His outstanding characteristic as a physician was that he always was equal to any emergency. Whether shells were flying overhead in the Argonne or burning walls were falling in Kansas City, he never failed to have the situation thoroughly in hand.

Somehow, Dr. Wilson almost invariably inspired a filial regard. One felt that here was a father, and a father who could be depended upon. The men he commanded in both the Spanish-American War and the World War found it easy to go to him with either a sore finger or a sore spirit, confident that both would be mended, accompanied perhaps with a wise, paternal reproof. And those who knew him only in civilian life shared this sentiment. Small wonder he is missed."—*Bulletin Jackson County Medical Society*.

NIMROD P. WOOD, M.D.

Dr. Nimrod P. Wood, Independence, a graduate of the St. Louis Medical College, 1881, died December 19, 1925, after an illness of only a few days. He was 65 years of age.

Doctor Wood was born and reared in Jackson County. For 17 years following his graduation from medical school he practiced at Blue Springs. He then moved to Independence where he remained the rest of his life. Early in his career he became a member of the Jackson County Medical Society and of the Kansas City District Medical Society. In both of these organizations he was an active worker and in 1889 was elected president of the Kansas City District Medical Society. In 1906 he was elected Councilor of the Twenty-eighth District of the State Medical Association, at which time Jackson County had been separated from the Twenty-first District only one year.

In 1914 he was elected president of Jackson County Medical Society. For many years he held the position of Professor of Principles and Practice of Medicine in the Medico-Chirurgical College of Kansas City, which was the successor of the Kansas City (Kansas) College of Medicine and Surgery. When the University of Kansas absorbed the Medico-Chirurgical College in 1905, Doctor Wood was appointed Associate Professor of Internal Medicine in the consolidated school, which position he held for 10 years.

In 1919 he was elected president of the State Association. He was a Fellow of the American Medical Association.

At the funeral of Doctor Wood, on December 21, Dr. G. Wilse Robinson, of Kansas City, spoke as follows:

As a representative of the medical profession, of which Doctor N. P. Wood was an honored member, I have been asked to say a few words at this time. To you, the friends and neighbors of Doctor Wood, many of you who knew him in his boyhood days, in the days of his young manhood, in mid-life and in later years, who knew the honorable, sincere and Christian life that he lived, words of praise from me would be useless. You knew him as an honorable gentleman, as a patriotic citizen, as one vitally interested in the welfare and progress of his community. You knew him as a kindly, sympathetic and successful physician. It is impossible to estimate the influence for good of such a life as that which was lived by Doctor Wood in this community.

Doctor Wood is dead but, in my opinion, the influence for good of such a life as he lived can never die. We doctors esteemed him highly. A doctor may deceive the lay public as to his character, his medical ability, etc., but he cannot deceive doctors.

Doctor Wood graduated from a good school but he did not consider his medical education complete at the time of his graduation. He sought by constant study, regular attendance at medical meetings and in various other ways to improve and increase his knowledge of his profession. He sought studiously and industriously during his entire professional career to become a better doctor. Doctor Wood was an ethical physician. The code of ethics of the medical profession is the Golden Rule of that profession. It requires that doctors deal honestly with the sick. Doctor Wood ever practiced the Gold Rule of his profession. We doctors of Jackson County elected him president of our County Society. The doctors of Missouri elected him president of the State Medical Association. It gave us pleasure to bestow upon him honors which he so justly deserved.

Doctor Wood is dead. We shall see him no more in this life but his spirit is with us, inspiring us to emulate him, stimulating us to live better, more sincere and useful lives. Doctor Wood lived for his profession, his family, his friends, and not for self. All are bereaved at his loss. To them we extend our sincere sympathy. He has left us for a little while but he will not be forgotten.

JAMES McCOMB, M.D.

Dr. James McComb, Lebanon, died at his home, March 5, 1926, lacking a few days of being ninety-four years old. He attended lectures at St. Louis Medical College in 1857 and 1858, and then engaged in practice in Laclede County until 1864, when he went to Philadelphia and graduated from Jefferson Medical College in 1865.

Dr. McComb spent his entire professional life in Laclede County, in his early practice riding horseback over a large territory. During the Civil War he did his work under many difficulties, often endangering his life, but duty called and he was not one to shirk from doing what he thought was right.

He served a short time as assistant surgeon in the Confederate Army but the call for service among his own people was so strong that he returned to Lebanon to take up the work among the sick. His unfaltering service and love of humanity did not go unheeded. Day and night, rain or shine, cold or hot, with his old-fashioned saddle-bag across his saddle,

sitting as straight as an arrow, he went forth as a messenger of hope to his many patients.

He served several terms as President of Laclede County Medical Society, also several years as U. S. Pension Examiner and in other places of trust and honor. In 1894 he was elected vice president of the State Medical Association. He loved the medical profession and never lost interest even after he retired from practice a few years ago, turning his practice over to his son, Dr. J. A. McComb.

Dr. McComb was honored by his fellows, respected and beloved by the community, and his life will be a benediction upon all who knew him.

J. M. BILLINGS, M.D.

WILLIAM FRICK, M.D.

Dr. William Frick, Kansas City, died February 20, 1926, aged 68 years. Doctor Frick after obtaining his preliminary education at Central College, graduated from the St. Louis Medical College in 1884. For a few months he practiced at Wright City, Missouri, and then moved to Kansas City. For many years he had limited his practice to diseases of the skin, and was professor of dermatology in the Kansas City Medical College. Doctor Frick was an Honor member of the Jackson County Medical Society and a Fellow of the American Medical Association.

JOHN A. HOGUE, M.D.

Dr. John A. Hogue, Holcomb, a graduate of the Kentucky School of Medicine, 1907, died January 14, 1926, of endocarditis, aged 42 years. He was born at Arcadia, Mo., and moved to Holcomb when a small boy. He finished school at Cape Girardeau, later receiving his medical education at Louisville, Kentucky. He specialized in the diseases of children.

Dr. Hogue was a member of Dunklin County Medical Society and of the State Medical Association.

DAVID O. HUDSON, M.D.

Dr. D. O. Hudson, Montgomery City, Coroner of Montgomery County, and a former member of our Association, died at Columbia, March 12, of heart disease, aged seventy years. Dr. Hudson was the father of Professor Manley O. Hudson, a member of the secretariat of the League of Nations, and professor of law in Harvard University.

CHARLES L. WEBSTER, M.D.

Dr. Charles L. Webster, Trenton, a graduate of the Missouri Medical College, 1894, died January 30, 1926, after a few days' sickness with nephritis and diabetes, aged 56 years.

Dr. Webster practiced medicine in Trenton for 32 years, and was a member of Grundy County Medical Society and of the State Medical Association.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

Camden County Medical Society, November 23, 1925.

Howard County Medical Society, January 8, 1926.

Ralls County Medical Society, February 27, 1926.

MISSOURI STATE MEDICAL ASSOCIATION 69TH ANNUAL SESSION

St. Louis University Auditorium
3642 Lindell Blvd.

St. Louis, May 18, 19, 20, 1926

PRELIMINARY PROGRAM

Clinics will be held at several hospitals on the morning of Tuesday, May 18, and Thursday, May 20. These clinics will be of a general nature, including surgical work and work in the specialties. On Wednesday morning, from 8 until 12, diagnostic clinics will be conducted at the general meeting place, St. Louis University Auditorium, and again on Thursday afternoon, from 1 until 3.

Dr. John A. Witherspoon, Nashville, Tenn., has accepted our invitation to be a guest of the Association and conduct one of the diagnostic clinics. Dr. Witherspoon, as most of our members know, is a former president of the American Medical Association, and is Professor of Clinical Medicine in Vanderbilt University School of Medicine.

Scientific papers will be read and discussed at the general meeting place on the afternoons of each day of the meeting.

The complete program will be published in our May issue.

The following papers have been scheduled for presentation at this writing:

Scientific Papers

Clyde O. Donaldson, Kansas City: Radiation in the Treatment of Non-Malignant Conditions of the Uterus.

H. S. Crossen, St. Louis: The Management of Various Types of Bleeding Uterine Myoma.

Symposium on Obstetrics: Subjects to be announced later.

Evarts A. Graham, St. Louis: Lung Abscess.

Francis Reder, St. Louis: The Gallbladder and the Surgeon.

Willard Bartlett, St. Louis: What We Accomplish by Operating Upon Exophthalmic Goiter Patients.

Kerwin Kenard, Kansas City: The Surgical Goiter.

C. B. Francisco, Kansas City: Non-Tuberculous Hips in Children Simulating Tuberculosis.

J. Albert Key, St. Louis: The Treatment of Tuberculosis of the Hip.

O. Jason Dixon, Kansas City: Some Points on the Diagnosis of Brain Abscess.

H. K. Wallace, St. Joseph: Acute Appendicitis:

With Report of 600 Consecutive Cases.

Hugh L. Dwyer, Kansas City: Concentrated Feeding in Infancy.

F. C. Helwig, Kansas City: Action of Tobacco and Other Tar Extracts Upon Epithelial Cells.

Symposium on Nephritis:

W. A. Myers, Kansas City: Blood Changes in Chronic Nephritis.

Ralph A. Kinsella, St. Louis: Classification and Functional Capacity in Chronic Nephritis.

Diagnostic Clinic: Chest Diseases.

C. H. Neilson, St. Louis.

Sam Snider, Kansas City.

Diagnostic Clinic: Heart Diseases.

J. C. Lyter, St. Louis.

C. C. Conover, Kansas City.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Eighteenth Meeting, February 8, 1926

1. DIVERTICULA OF FALLOPIAN TUBES: AN ETIOLOGICAL FACTOR IN TUBAL PREGNANCY.—By DR. F. P. McNALLY.

The most common lesions found by previous investigators, notably Hoehne, to account for the mechanical arrest of the fertilized ovum have been blind pockets formed by adhesions of folds of tubal mucosa as the result of previous inflammation; or the invasion of the tube wall for short distances by tubal epithelium, the so called salpingitis isthmica nodosa, also probably of inflammatory origin. True diverticula have not been commonly found.

Of twelve cases of tubal pregnancy studied in part or completely by serial sections, true diverticula, lined by typical folds of tubal mucosa, were found in ten cases, or 83.3 per cent. In one case the blood clot with villi could be demonstrated in the blind end. In the others villi and blood were found in the diverticula, with the main lumen free, but proof that the blind end was the cause of the arrest of the ovum could not be shown.

While the series is too small to make any definite statements, the frequency of the occurrence of this anomaly as found suggests the possibility of its being a more important factor than has been previously considered.

DISCUSSION

DR. LEO LOEB: There has been general agreement that a mechanical obstruction to the passage of the egg somewhere on its way through the Fallopian tube is the cause of tubal pregnancy; but as to the cause of this obstruction there has been considerable difference of opinion. However, on the whole, the view is prevalent that adhesions of the tubal mucosa due to inflammatory conditions are by far the most important or almost the only important cause. The very careful studies of Dr. McNally point however very strongly to the conclusion that it may be necessary to change this opinion and to consider etiologically in addition to inflammatory changes certain embryonal abnormalities which do seem to occur in a number of cases. How frequently the one or the other of these factors is responsible for tubal pregnancy the future must show.

However, there is in addition to these factors another factor in the etiology of tubal pregnancy which has to be considered, namely, the readiness of the tubal mucosa to allow the nidation of the ovum. While in exceptional cases it is possible in the guinea pig for an ovum to fix itself in the peritoneal side of

uterus—in many experiments in which such an implantation should have been effected, I obtained a positive result only in one case and this concerned a very early stage of embryonic development—I never succeeded in obtaining a tubal pregnancy in this animal through ligating a tube, although very frequently an embryo developed, if the ligature included a small part of the upper end of the uterine horn. In women, on the other hand, obstruction very frequently leads to tubal pregnancy. There must, therefore, be a difference in the receptivity of the tubal mucosa in the case of the guinea pig and of the human race. And this corresponds to the ability of the human tubal mucosa to form decidual tissue in response to the stimulus given off by the egg, while in the guinea pig the tube is unable to respond in this manner. This indicates a different behavior on the part of both types of Fallopian tubes, and it suggests very strongly that an implantation of the ovum may be much more readily accomplished in the case of women; it does not prove that decidua formation is absolutely required for the first phase in the nidation and development of the ovum, although such a reaction renders both these processes in all probability much more easy. In fact, as I stated above, in exceptional cases it is possible for the ovum to fix itself in the peritoneal surface of the uterus and to undergo the first stages of development without the aid of a decidual reaction on the part of the host tissue.

2. A FUNCTION OF THE SPLEEN.—By DR. H. A. HARRIS.

A brief historical resume of our knowledge of the spleen was given with special reference to the work of William Hewson (1739-1774) and Henry Gray (1825-1861), the author of the famous text book of anatomy. In 1901, Sir Thomas Lewis clearly indicated the differences in structure of the spleen, the haemal glands, the haemal lymphatic glands, and the lymphatic glands and said: "The endothelium lining the reticulum, capsule, adenoid tissue and capillaries is continuous, and I think it is highly probable that phagocytes may be developed from any or all of its cells." Ribbert, in 1914, introduced lithium carmine as an intravenous injection for vital staining and showed that it was specific for the renal and hepatic epithelium and for what epithelium which Aschoff later designated as the epithelium of the reticulo-endothelial system. In 1923 Barcroft showed that when the hemoglobin of the spleen pulp, in rats breathing 1 per cent. CO, is compared with that of the general circulation, there is a lag between the percentage of CO hemoglobin in the general circulation and that in the spleen pulp, which may attain to thirty minutes. Thus the splenic blood is virtually outside the general circulation in the sinusoid system.

The volume changes in the spleen have been studied by Barcroft, Harris, Orahovatz and Weiss. Small metallic clips are placed in the borders of the spleen and the animal makes an excellent recovery. Two X-ray tubes are so arranged that a lateral and antero-posterior radiograms of the animal are taken within an interval of one second. The shape and size of the spleen can be determined by a method of reconstruction from the radiograms. Thus the size of the spleen in the cat, dog, rabbit and monkey have been determined during life without the necessity of an operation or an anesthetic synchronously. The normal spleen is much larger than that of the dead animal, as is clearly shown by the radiograms. In the case of death produced by hemorrhage, the spleen decreases in volume to one third, or even one fifth of the size in the live animal.

In the earlier stages of hemorrhage, the spleen contributes to the circulating blood an amount of material approximately equal to that of which the hemorrhage deprives it. During exercise also, the spleen expels its contents into the circulation in a great degree. Estimates in the cat and dog show that in exercise the shrinkage of the spleen corresponds to 6-15 per cent. of the blood volume. The view is put forward that the spleen exercises a real function in adjusting the volume of the circulating blood, or more correctly, of the circulating functional hemoglobin according to the needs of the animal.

Radiograms of the spleen in the cat and dog were shown and the method of reconstructing the volume of the spleen from the radiograms was demonstrated.

REFERENCES.

- Observation on the taking up of carbon monoxide by the hemoglobin in the Spleen. Barcroft, J. and Barcroft, H. Jour. Phys. **58**:138-144. (1923.)
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 A Contribution to the Physiology of the Spleen. Barcroft, J., Harris, H. A., Orahovatz, D., and Weiss, R. Jour. Phys. **60**:443-456. (1925.)
 Functions of the Spleen (Mysterii Plenum Organon, Galen) Krumhaar, E. B. Phys. Reviews. **6**:160-200. (1926.)

DISCUSSION

DR. D. P. BARR: The normal response to vigorous muscle exercise includes a rapid increase in the percentage of hemoglobin and the number of red cells in the peripheral blood. This increase may in certain cases be greater than ten per cent. of the original hemoglobin estimation. It is found both in the arterial and venous blood and occurs a surprisingly short time after the beginning of exercise.

In experiments performed some years ago, we had occasion to draw arterial blood during the second minute of vigorous exercise. It was found that the rise in hemoglobin had already occurred. The origin of this constant change has always been a mystery and one is tempted to believe that the splenic mechanism, so beautifully demonstrated by Dr. Harris, may be responsible. It is difficult to believe, however, that this can explain all of the change which takes place. Dr. Harris has found that the spleen decreased about 50 per cent. in size as the result of exercise. If one assumes a spleen much larger than ordinarily seen at autopsy, say 500 grams, and considers that 250 grams of it are suddenly released as blood rich in hemoglobin, this could account for an increase of only 5 per cent. Even then one would have to assume for the splenic blood a much higher percentage of hemoglobin than could be reasonably expected. I should like to ask Dr. Harris whether any other organs are known to take part in the process.

DR. H. L. WHITE: How soon after the onset of exercise does the reduction in size of the spleen manifest itself? Dr. Rosen, working in the physiology department, has found that the volume output of the heart per minute is considerably greater in the recumbent than in the erect posture. This observation has also been made by Henderson and Haggard. We have wondered if this increased circulation rate means that there is an increased amount of blood in circulation but up to the present no observations on the effect of posture on blood volume have been made. I should like to ask Dr. Harris if he has observed any postural effects on the size of the spleen.

CLAY COUNTY MEDICAL SOCIETY

The Clay County meeting for February merged

with the Twelfth Councilor District meeting on February 9. This gathering assembled at the Snapp Hotel in Excelsior Springs, headquarters of the "Springs" division of the county society.

The meeting opened as usual with noon dinner. About one hundred members and guests were seated, the ladies of the Auxiliary being well represented.

After the delightful repast, Dr. Spence Redman, of Platte City, our faithful Councilor, rapped for order and after a few well chosen words introduced Hon. W. A. Craven, Mayor of Excelsior Springs, who welcomed the physicians and friends in his own happy style. The next speaker, Hon. J. Henry Caruthers, Assistant Attorney-General, spoke on the topic, "Defects in the Medical Laws." Mr. Caruthers is a forceful speaker and had no difficulty in finding defects. There are six non-reputable medical schools in the United States, three of them in old Missouri. He advised keeping in touch with our representatives in the legislature.

Dr. Redman then gave an interesting talk on "Preventive Medicine" and introduced Dr. Emmett P. North, speaker of the day, who is President of our State Society. We have not space for a full report of Dr. North's speech which abounded in substantial facts, figures and admonition.

Professor W. S. Smith, Superintendent of Excelsior Springs Public Schools, gave us one of the best short talks of the day, relative to the hygiene of the school and the importance of the care of the child in building citizenship. Professor Smith is a hard worker and one of the foremost teachers of the state. He emphasized that "Health getting and health keeping is one of the big problems of our educational system."

Senator B. T. Gordon gave a sound talk on legislative matters and expressed his cordial support of methods leading to higher medical fitness. He asked cooperation for which he was roundly applauded.

A business meeting followed, at which Dr. E. J. Goodwin, State Secretary, was an interested spectator. Dr. Goodwin listened to some rather impassioned speeches from Clay County members on quackery. Dr. North gave some valuable suggestions, supplemented by Mr. Caruthers. Clay County is no friend to the advertising charlatan. At this meeting it was decided to continue the Councilor District Meetings.

Following this, the session adjourned to the Casino Theatre where Dr. Gradwohl, St. Louis, exhibited moving pictures showing methods of making tests for blood sugar content. This was one of the rare privileges of the society.

Dr. Carr, of Polo, was an honored guest of the meeting and talked encouragingly.

J. J. GAINES, M.D., Secretary.

HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met in special session, on call of the president, Dr. Bullock, at the public library, in Mound City, Thursday, March 4.

As it was the opinion of all members in attendance that meetings should be held every month, instead of quarterly as heretofore, a resolution to change the by-laws to read, "The regular meetings of the Society shall be held first Thursday in each month was presented and will be voted on at next regular meeting, which will take place at Forest City, April 1.

On the program appeared the names of Dr. J. M. Davis and Dr. Kearney. Dr. Kearney not being present, Dr. Davis read a paper on, "The When, How and Why of Digitalis, Strychnine and Alcohols in Pneumonia." The afternoon was taken up by discussion of his paper, in which were brought out many original ideas along the line of treatment.

After the meeting dinner was served at Hotel

Gladstone, the visitors being entertained by physicians in Mound City.

In attendance at the meeting were Drs. Bullock, Chandler, J. M. Davis, Ottman, Tracy, Williams, Cox, Perry, R. R. Miller Gebhart, Hogan, Wood.

J. F. CHANDLER, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society held its regular monthly meeting in Lexington, Tuesday afternoon, March 9. The meeting was called to order by the president, Dr. Lewis Carthrae, Jr. The minutes of the last meeting were read and approved.

The following members were present: Drs. Lewis Carthrae, Jr., Corder; J. W. Horner, Alma; T. R. Butler, Lexington; W. G. Harwood, Dover; J. Q. Cope, Lexington; A. J. Chalkley, Lexington; Edmund Lissack, Concordia. Owing to the small attendance it was thought best to hold the prepared program over for the Higginsville meeting to be held April 13.

Dr. Chalkley made the motion that the county society raise the dues to \$10.00, of which \$8.00 is to be sent to the State Association. Dr. Harwood seconded this motion, and the members present approved it.

Road conditions have been very poor here this winter, which accounts for poor attendance. We expect to have a good meeting in Higginsville, however, and will use the program prepared for the March 9 meeting, adding a few papers and demonstrations.

EDMUND LISSACK, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

A regular meeting of the Randolph County Medical Society was held March 9 in the Public Library building at Moberly, Dr. M. R. Noland, President, in the chair.

The following members were present: Drs. M. R. Noland, J. Maddox, T. S. Fleming, L. A. Bazan, C. H. Dixon, L. E. Huber, E. W. Shrader, C. K. Dutton, P. C. Davis, S. T. Ragan, R. D. Streeter, F. L. McCormick, all of Moberly; and R. A. Woods, of Clark.

The Secretary read a letter from Dr. D. A. Barnhart, who has been very ill at his home in Huntsville, thanking the Society for the letter of sympathy and flowers sent him. We are glad to state that Dr. Barnhart is improving.

Drs. E. W. Shrader and J. Maddox gave very interesting and instructive talks on etiology, symptoms and diagnosis of, pneumonia, broncho and lobar respectively.

In the absence of Dr. S. T. Ragan, who had been assigned to discuss the "Complications and Treatment of Pneumonia," Dr. L. A. Bazan was asked to act in his capacity, to which he responded favorably. He very ably discussed both complications and treatment. A general discussion followed and, although the attendance was small, everyone was much interested.

Dr. Ragan appeared on the scene very late, and soon after his arrival made an excellent talk on the subject that had been assigned to him, after which a general discussion followed.

The meeting adjourned, to meet the second Tuesday in April, at the Commercial Club Rooms, Moberly.

F. L. MCCORMICK, M.D., Secretary.

SALINE COUNTY MEDICAL SOCIETY

In December, 1925, the Saline County Medical Society elected the following officers for the year 1926:

Dr. A. T. Coffman, President; Dr. G. S. Hardin, Vice President; Dr. Fred A. Stahl, reelected Secretary-Treasurer, and Dr. G. A. Aiken member board of censors for three years (1926, 1927, 1928). In December, 1924, Dr. S. P. Simmons and Dr. D. F. Manning were elected to serve two years (1925 and 1926) as members of the board of censors. In December, 1924, Dr. F. A. Howard was elected to serve two years (1925 and 1926) as state delegate, and Dr. W. M. Bickford as alternate delegate for the same period. As members of the medical advisory hospital board were elected Drs. E. E. Brunner, D. F. Manning, F. A. Howard, L. S. James, and A. C. Putnam. As members of the program committee were appointed Drs. G. S. Hardin, Robert W. Kennedy, and S. P. Simmons. The legislative committee of last year, Drs. Howard, Manning, and Kennedy, were reappointed.

Each month the members of the Medical Society and Auxiliary have been having a joint luncheon at a hotel or at a private home after which each organization held its meeting. During the past year at some monthly meeting members of the Society and Auxiliary have enjoyed being the guests of Dr. and Mrs. E. E. Brunner at the Missouri Colony, the ladies of the Auxiliary who live in Marshall at the home of Dr. and Mrs. W. M. Bickford, and Dr. and Mrs. C. L. Lawless on their farm. After a picnic-style luncheon on the campus of Missouri Valley College, the Society and Auxiliary held a joint memorial service for late Dr. John R. Hall. We have had some very fine talks on special subjects by Dr. Ravenel, of Columbia, Dr. Trask, of Kansas City, Dr. D. R. Black, of Kansas City, Dr. A. B. Jones, of Kansas City, and Dr. Herman Pearse, of Kansas City. We have also had some good papers by local men. At our last meeting the Society voted to approve the medical practice act and to support for members of the legislature those who are in favor of the same, regardless of politics.

Dr. W. M. Bickford, of Marshall, is now doing postgraduate study in eye, ear, nose and throat work in Vienna.

FRED A. STAHL, M.D., Secretary.

ST. LOUIS MEDICAL SOCIETY

Meeting of January 19, 1926

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Radical Treatment of Trigeminal Neuralgia with a Review of Seventy-one Operations Without a Death," with lantern slide demonstration, by Dr. Ernest Sachs.

Discussion by Drs. Wm. W. Graves, Francis Reder; Dr. Sachs closing.

"Fetal Monstrosities: Their Relation to Dystocia. Personal and Collected Cases," with lantern slide demonstration, by Dr. E. Lee Dorsett.

Discussion by Drs. Wm. H. Vogt, Edgar F. Schmitz, Benjamin Shanklin, Amand Ravold; Dr. Dorsett closing.

The chair introduced Mr. Dean Elliot who spoke regarding a campaign for financing physical education in the schools of Missouri.

Dr. A. H. Hamel moved that this matter be referred to the Women's Auxiliary to the St. Louis Medical Society. Seconded and carried.

Attendance 192.

Meeting of February 9, 1926

The meeting was called to order at 8:35 p. m. by the president, Dr. Amand Ravold. The minutes of the previous meeting were read and approved.

Dr. Joseph Costello presented a case of goiter in a three year old girl.

Dr. Francis Reder introduced the speaker of the evening, Dr. Arthur E. Hertzler, of Halstead, Kansas, who read a paper on "Classification of Goiters," with lantern slide demonstration.

Discussion by Drs. R. L. Thompson, Chas. H. Neilson, Wm. T. Coughlin, E. V. Mastin, Francis Reder, Albert Key; Dr. Hertzler closing.

Attendance 211.

Meeting of February 16, 1926

The meeting was called to order at 8:35 p. m. by the president, Dr. Amand Ravold. The minutes of the previous meeting were read and approved.

Dr. Ravold announced that the meeting was a joint one with the Missouri Association for Criminal Justice and stated that about 200 invitations had been extended to members of the Missouri Bar Association, merchants, bankers, clubs, and other associations, also the daily press.

Mr. Guy Thompson, Chairman of the Survey Committee of the Missouri Association for Criminal Justice, read a report on the office of Coroner.

Discussion by Drs. R. L. Thompson, R. B. H. Gradwohl, R. S. Vitt, Mr. J. H. Caruthers, and Dr. H. J. Scherck.

Attendance 86.

Meeting of February 23, 1926

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "A Non-Operative Method of Removing Stones from the Kidney Pelvis," with lantern slide demonstration, by Dr. Bransford Lewis.

Discussion by Dr. Grayson Carroll.

"A New Old Operation for Uterine Prolapse," by Dr. George Gellhorn.

Discussion by Drs. Edgar F. Schmitz, Frank Hinchey, C. H. Shutt; Dr. Gellhorn, closing.

Attendance 84.

Meeting of March 2, 1926

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold. The minutes of previous meeting were read and approved.

The scientific program consisted of the following: "Diagnostic Value of Pneumothorax," by Dr. J. J. Singer.

Discussion by Drs. Seelig Simon, M. F. Arbuckle; Dr. Singer closing.

"The Treatment of the Insane," by Dr. R. C. Fagley.

Discussion by Drs. Hillel Unterberg, Leland B. Alford, Chas. H. Burdick, Amand Ravold; Dr. Fagley closing.

Attendance 55.

E. C. FUNSCH, M.D., Secretary.

OPHTHALMIC SECTION OF THE ST. LOUIS MEDICAL SOCIETY

Meeting of February 12, 1926

Bilateral Ptosis: Dr. Wm. F. Hardy presented the case operated upon by Dr. Walter Lancaster, of Boston.

Chronic Trachoma with Entropion: Dr. Amalie M. Napier presented a case which had had numerous operations and the condition was finally entirely relieved.

Visual Acuity After Cataract Operation: Dr. C. H. Hobart reported the results on the two cases operated upon by Dr. Lancaster, of Boston, while a visitor in St. Louis.

Hyperphoria of High Degree in a Child: Dr. C. W. Tooker reported a case of hyperphoria of high degree in a child aged eight, who had complained of a little pain in her eyes and vertical diplopia at various times. Her vision was normal with a hypermetropia of one diopter, right and left. Her left eye usually seemed lower than the right but frequently the eyes were parallel. Fixating with her right eye, the left eye under cover turned upward, and the amount of vertical deviation of either eye was equal. No paresis of any ocular muscle could be discovered. The right hyperphoria varied between 8 and 20 degrees and she had only occasional binocular vision. The case corresponded to the type of concomitant vertical squint in hyperphorias of very high degree described by Duane.

Because of the age of the patient, the varying amount of hyperphoria, and the normal power of all the ocular muscles it was thought inadvisable to operate at the present time.

DISCUSSION

Drs. Green and Wiener advised operation in this case with lengthening of the superior rectus and advancement of the inferior rectus.

Dr. N. R. Donnell read a paper on "Work seen recently at the Rolla, Missouri, Trachoma Hospital" which will appear later in full, in the Missouri State Medical Journal. Dr. Donnell said in part:

"Dr. Green and I accepted the kind invitation of Dr. Paul Mossman who is in charge of the government's work on prevention and treatment of trachoma in Missouri. The Rolla Hospital is one of three such operated by the government, the other two being at Russellville, Arkansas, and Knoxville, Tennessee.

I might mention here the type of individual in which trachoma is most often found, for having seen a good deal of trachoma in other parts of the state, I was rather impressed. They are, for the most part, of a rather low order of intelligence many being unable to read. This is not to be wondered at for they are handicapped by poor vision, and many of them come from the isolated districts where they have little contact with the outside world and little opportunity for advancement. But many of them display a native shrewdness that at times is surprising and cured of their distressing malady, many would soon become useful citizens and worthy of all the effort which is being put forth in their behalf.

The treatment as administered by the doctor in charge consists in, first, a complete eversion of the lids, this being accomplished by using an ordinary glove buttoner which brings out the conjunctiva in the retrotarsal fold better than any method I have seen used; then a gentle brushing of the conjunctival surfaces with a 4% silver nitrate followed at once by a free irrigation with a warm saturated solution of boric acid in normal saline. After this treatment and irrigation at 10 o'clock the eyes are again irrigated freely by the nurse at 1 o'clock, again at 4 o'clock and again at 7 o'clock. They are likewise irrigated at 7 a. m. the next morning and 10 o'clock. The treatment is repeated by the doctor as on the previous day. The more acute cases are treated entirely in this way, the more advanced cases of certain types are treated by a form of grattage, which we did not see but I inferred was similar in procedure to that which many of us saw done by Dr. McMullen in St. Louis. The cases complicated by trichiasis are operated on and from the description I inferred this operation to be one in which a segment of the skin of the lid was excised, a triangular wedge laterally across the tarsus removed and the skin drawn together with sutures. We saw some

cases on which this had recently been done and the results seemed to be very good.

Attached to this unit is Dr. Ida Bengston, who is a trained bacteriologist and pathologist from the biological laboratory in Washington and selected because of her attainment and fitness for this work. She has her laboratory in one of the state buildings used as a laboratory by the school and I believe she in turn gives some special lectures to the students. She seems well qualified and fairly well equipped to carry on the research work incident to trachoma. She showed us many beautiful slides both from cultures and cut sections and while it was intimated that she has some very interesting leads, she is very modest and very reluctant to make any definite statement of her accomplishment at this time. I rather expect something of interest later."

DISCUSSION

Drs. Wiener and Green told of their visits to the Trachoma Hospital and concurred in Dr. Donnell's views. Dr. Green showed lantern slide pictures of the hospital.

The following officers were elected: Chairman, Dr. N. R. Donnell; vice chairman, Dr. J. F. Hardesty; secretary, Dr. Leo L. Mayer; treasurer, Dr. C. P. Dyer.

LEO L. MAYER, M.D., Secretary.

WOMEN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.
 Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.
 Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.
 Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.
 Treasurer, Mrs. C. T. Ryland, Lexington.
 Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.
 Chairman of Finance, Mrs. John C. Parrish, Vandalia.
 Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.
 Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

THE PUBLIC HEALTH AND WELFARE ASSOCIATION OF AUDRAIN COUNTY

Audrain County of which Mexico is the county seat has a very useful organization functioning under the above name. Its activities are such as to recommend it to all counties not having a health unit. The logical development of this fine organization would be a health unit and a welfare worker. Quoting from its bulletin the activities include:

1. A visiting rural school nurse. (Two if possible.)
2. Promoting baby, and maternity welfare.
3. Relieving distress by providing fuel, clothing, food and shelter.
4. Investigating and studying causes of distress with advice and help, as how to get out and keep out of difficulties.
5. Giving personal service and help to those in any kind of trouble.

The following account prepared by the vice president and executive secretary of this organization, Mrs. R. W. Berrey, shows what can be done where the right spirit and proper initiative prevail:

Statement by Mrs. R. W. Berrey

Thinking that perhaps our simple and practical methods might be successfully worked out in other counties in the state, Mrs. M. P. Overholser, President of the Women's Auxiliary to the Missouri State Medical Association, has asked us to prepare an article on our organization and its functioning. We are submitting this article not to stress what has been done by any individual, group or organization, but rather to show what may be accomplished by the united efforts of the people of any community.

Audrain County is particularly fortunate in many respects, especially in the type of her citizens. While primarily an agricultural county we have located here two of the largest fire brick companies in the United States which adds an industrial phase to our community life. The presidents of these companies are not only outstanding men of the business world but are also men of clear far-reaching vision, very philanthropic and ever ready to do all in their power for the betterment of the community. To these men and to our broad-minded progressive county court, the medical profession, and our public spirited citizens, rightly belongs the credit of whatever measure of success we may have met.

Soon after organizing, February 7, 1925, we invited Dr. A. F. Kuhlman of the School of Sociology of our State University to come to Mexico and give us a lecture which he graciously did in March. His talk had the effect of starting a group of serious minded people to thinking along the right lines. Then in the summer the State Board of Health was good enough to send us a nurse for public health talks and demonstrations through the county. These talks interested still another worth while group, the mothers of the county. Then our press, always co-operative, gave the movement much publicity so by this time interest was being aroused all over the county. Still we were without sufficient funds to employ a nurse and that we considered should be the foundation of the work.

At this time the doctors came to our assistance and made it possible for us to buy a car. We then ventured to employ a nurse who took up public health work in the rural schools and all through the county following the methods prescribed by the State Board of Health.

We then solicited funds in many different ways, but at no time did we put on a spectacular "drive." The work is appealing and we found many friends so that by using economy we have at all times been able to meet our obligations.

February 1 this year our county court entered into an agreement with the State Board of Health whereby we received state aid, the county court matching the state money dollar for dollar. Our county then began a full year public health program, relieving us of the burden of the nurse's salary and placing us in a position where we hope to employ a welfare worker this fall.

We feel that public health and welfare work should go hand in hand to bring about the best results.

PLAN TO ATTEND THE ANNUAL MEETING AT ST. LOUIS

By the time this issue of THE JOURNAL reaches you the plans will be well under way for the annual state meeting of the Auxiliary in St. Louis, May 18-20. The time and place conform with the time

and place of the State Medical Association meeting. For the Auxiliary meetings an entertaining and profitable program is being prepared in addition to the social features of the meeting that will be supplied by the hostess Auxiliary, the Women's Auxiliary to the St. Louis Medical Society.

From every county we hope for a generous attendance at this meeting. If you are a member of an Auxiliary you will want to come to this family gathering. If your county has no Auxiliary we desire to have you present anyway to share our good program and friendliness, and to know the plans we have for mutual acquaintance and for helpfulness in furthering the aims of the medical profession for community welfare.

The attention of the Auxiliaries is called at this time to an amendment adopted at the annual meeting last May in Kansas City providing that, in addition to the delegates to the annual meeting called for in the original constitution, "the president of each county Auxiliary, or in her absence the vice-president, shall be an ex-officio delegate."

THE NATIONAL MEETING AT DALLAS.

The Women's Auxiliary of the American Medical Association has planned an elaborate and attractive program for the Dallas session, April 20-22. The Missouri Women's Auxiliary should be well represented since not many national meetings come so near us. The program follows:

Tuesday, April 20

- 10 a. m. Meeting of Executive Board, English Room, Adolphus Hotel.
- 4 to 6 p. m. Garden Party, Maple Terrace, Mrs. John Oliver, honoring Mrs. Seale Harris, President; Mrs. F. P. Geugenbach, President-elect, and visiting ladies.
- 8 p. m. Installation of President of the American Medical Association.

Wednesday, April 21

- 10 a. m. Annual Session of Women's Auxiliary of the American Medical Association, Palm Garden, Adolphus Hotel.
- 12:30 p. m. Barbecue, Fair Park.
- 8 p. m. Musicales, Roof Garden, Baker Hotel. Women's Auxiliary to Dallas County Medical Society honoring the Women's Auxiliary of the American Medical Association and visiting ladies.

Thursday, April 22

- 12:30 p. m. Luncheon, Fair Park.
- 9 p. m. President's Reception.

ST. LOUIS MEDICAL SOCIETY AUXILIARY

The Women's Auxiliary to the St. Louis Medical Society held an open meeting in the Auditorium of the Society's building on February 5. Mrs. Robert Atkinson gave a book review on "The Queen of Cooks and Some Kings," by Mary Lawton. The meeting was most delightful and aroused such enthusiasm that fifty new members joined the Auxiliary at this time.

On February 26, there was a board meeting for the purpose of formulating plans for the Missouri State Medical Association meeting which will be held in St. Louis May 17 to 20 inclusive. The wives and daughters of the entire list of members of the St. Louis Medical Society have been divided into groups and will be solicited through a telephone campaign to aid in the entertainment of the ladies accompanying physicians to this meeting.

The Women's Auxiliary is looking forward to a big meeting and extends to all visiting ladies, a cordial greeting and welcome.

LACLEDE COUNTY

Though no Women's Auxiliary exists in Laclede County fine assistance in the Health Poster Contest has been rendered there by Mrs. J. C. Scott, wife of Dr. J. C. Scott, of Lebanon. Mrs. Scott took up the project with the County Superintendent of Schools, Mrs. G. C. Jones, and together they have worked out a plan, the final contest to be held with the county spelling match in Lebanon the latter part of March. The state contest will be held in Jefferson City, April 28, 29, 30.

CONCERNING HYGEIA

A recent letter from Mr. F. V. Cargill, circulation manager of *Hygeia*, informs us that Missouri now has 1328 *Hygeia* subscriptions, an increase of 526 names compared with January, 1925. The records show that more than four-fifths of this increase can be credited to our Women's Auxiliary.

This is a splendid record but the most gratifying result is the letters I am receiving from the enthusiastic county chairmen. The Johnson County Auxiliary has placed *Hygeia* in the city and school libraries and the librarians say they have no magazine more universally read and enjoyed.

Mr. Cargill has recently sent out a subscription campaign letter to thirty-four Missouri auxiliaries. Have you received yours? If not, write Mr. F. V. Cargill, 535 N. Dearborn St., Chicago.

I have some extra sample copies of *Hygeia* that I shall be glad to send out upon request.

MRS. DAVID S. LONG, Harrisonville, Mo.
State Chairman of *Hygeia*.

FREE TREATMENT OF INDIGENT CRIPPLED CHILDREN

Through the efforts of Mrs. Charles W. Greene, Columbia, Mo., Chairman of Child Welfare, Missouri Federation of Women's Clubs, arrangements have been made by which free treatment may be supplied the indigent crippled children of the state. The treatment will be given either in St. Louis or Kansas City and free transportation for child and attendant will be provided. By a crippled child is meant anyone under twenty-one years of age not able to pay who has imperfect arms, legs, or back whether congenital, accidental or the result of sickness. Anyone interested in taking advantage of this privilege should write for further particulars, addressing Mrs. Chas. W. Greene, Columbia, Mo.

BOOK REVIEWS

ABDOMINAL OPERATIONS. Volumes I and II. By Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, London, England. Fourth edition, revised. Illustrated. Philadelphia and London. W. B. Saunders Company. 1926. Price \$20.00.

Like everything from the pen of Sir Berkeley Moynihan this book is of great value, containing much real information and more inspiration than the works of the lesser lights in the profession.

The "Preface to the Fourth Edition" is an essay in itself. Characteristic of the author, it admonishes the profession by calling attention to incompetent

and light-hearted operators and inspiring in a general way toward higher ideals.

Twenty years ago this work first appeared. It has been revised but still retains much of the material of the previous editions. Harrington's solution, which is fairly strong with bichloride and hydrochloric acid, is recommended for preparing the skin of the operative field. This solution is undoubtedly efficacious but most surgeons have found it too irritating for routine use, and have long ago discarded it in favor of iodine or picric acid.

Carcinoma of the rectum is treated in a masterly way. However, the only operation for this ailment described in detail is that of Mr. Ernest Miles and we welcome its excellent presentation. But this is not a closed subject and the operations of Kraske, Hochenegg and others are far from obsolete. They really should have some consideration.

One of the most comprehensive chapters is that on "Resection of the Liver," which is one of the author's pet subjects, he having done considerable research along this line and his contributions to the technique of this procedure are very material.

Here it might be mentioned that every writer possesses much merit in some fields and less in others. The value of his work depends upon the preponderance of the former. Sir Berkeley is a master in abdominal surgery and his meritorious work stands out in these two volumes. It would be well for every surgeon who invades the abdomen to read "Abdominal Operations" from cover to cover.

The language is also characteristic of the author whose style is distinctly his own and we all know that he can say things and write in a most direct and effective fashion.

R. E. S.

ULTRA-VIOLET RAYS IN THE TREATMENT AND CURE OF DISEASES. By Percy Hall, M.R.C.S. (Eng.), L.R.C.P. (Lond.). St. Louis, C. V. Mosby Company. 1924. Price \$3.75.

After reading this book one must pause to ponder how much the enthusiasm of the author and the psychic effect of the heliotherapeutic paraphernalia on the patient had to do with the many, many cures and beneficial results obtained in so large a variety of ailments mentioned. Certain it is that Dr. Hall is not a very strong advocate of drug therapy.

As a whole this little volume will make interesting three hours reading for the physician anxious to obtain a glimpse in the realm of light treatment. It carries one through the history of light in medicine in skeletal outline, and gives full credit to the pioneers in this form of therapy.

Much of the book is devoted to a description and cuts of various makes of lamps, both foreign and domestic, to short case reports, to results obtained by the author and others. At times there is a hint of the old "shotgun" medicinal prescription in the combined use of light, heat and X-ray measures.

If Dr. Hall has stimulated interest in this newer method, so that well-meaning physicians and high-grade hospitals will give it that critical and fair trial it deserves, we are bold to say this volume's "main purpose will have been achieved."

S. S.

NEUROLOGICAL FRAGMENTS. By J. Hughlings Jackson, M.D., F.R.S., F.R.C.P. With Biographical Memoir by James Taylor, M.D., and including the "Recollections" of the late Sir Jonathan Hutchinson and the late Dr. Charles Mercier. Oxford University Press. American Branch, 35 W. 32nd St., New York City.

The book first contains three biographical accounts written by James Taylor, Jonathan Hutchinson and

Charles Mercier. Then appear twenty-two short articles on a great variety of neurological subjects that are reprints chiefly taken from the *Lancet*. Their publication covered a period of about sixteen years, which years were among the most active of Jackson's life. Finally there is a complete bibliography of Jackson's literary contributions.

It is scarcely worth while to enter into detail upon the subjects touched in the numerous articles or upon Jackson's views. The articles consist chiefly of speculations upon the basic processes underlying many clinical symptoms and conditions and do not lend themselves readily to summary. They are remarkable as giving some insight into the working of one of the most brilliant of neurologic minds.

It has perhaps been a matter of wonder to some, the degree of reverence with which Jackson is universally regarded by British neurologists, considering his own definite contributions to neurological knowledge which are perhaps no more numerous or important than those of some others. This book makes the point clear. The reason was Jackson's method of work. He was supremely interested in his subject and was constantly seeking to discover fundamental neurological processes. No symptom was too slight for him to try to find what its significance might be in broader relationships. His active imagination was always making comparisons and seeing analogies in apparently unrelated symptoms. Consequently it has happened that many of his deductions have been and still are found valuable in the unravelling of neurological tangles.

Another source of Jackson's fame is undoubtedly his manner with his students. He encouraged and stimulated them, so that they have continued the work he began. It is to his credit more than to any other man that there is today in London a great school of neurology. Teachers in this country could profit by his example in this respect.

The book is well worth reading by every neurologist and medical teacher both because of the information it contains and because of the light on the methods of the man of whom it has been said he is of all British neurologists the nearest to being a genius.

L. B. L.

HANDBOOK FOR MENTAL NURSES. Handbook for Attendants on the Insane. Seventh edition. Published under the authority of the Medico-Psychological Association, London: Bailliere, Tindall and Cox, Henrietta St., Covent Garden. 1925. American agents: The Chicago Medical Book Company, Congress and Honore Sts., Chicago, Ill.

The committee of the Medico-Psychological Association of Great Britain, which supervises the preparation of this excellent book for nurses, includes the names of several of the foremost psychiatrists of England and Scotland.

It would be difficult to think of a better plan of preparation for a book of this kind. Mental nurses in England have a four year course leading to registration similar to registered trained nurses in America.

To the best of our knowledge no book so carefully prepared and covering such a wide range of subjects indispensable to the teaching of mental nurses has appeared in this country.

The instruction is very practical, presented in plain English, easily comprehended by pupils of High School grades, logically arranged and splendidly indexed.

It would be fortunate if the American Psychiatric Association would encourage the wide introduction of this book in the mental hospitals of this country, for the problems to be met among the insane are much the same everywhere.

We are sorely in need of more and better trained mental nurses, and if this book of instruction could be mastered by them and intelligently applied, a new day would dawn for the mentally ill. M. A. B.

LE TRAITEMENT DU DIABÈTE. Par Marcel Labbé, professeur de Pathologie générale à la Faculté de Paris, Médecin de La Charité. 1 volume de 152 pages. Collection Médecine et Chirurgie pratiques. Masson et Cie, Editeurs, 120 Boulevard Saint Germain, Paris-VI, France. Prix 8 fr.

This little book is not a scientific treatise on diabetes, but rather a guide to the physician in treating cases of diabetes. It is quite brief, but in that respect is to be commended since it is to be used by busy practitioners. In going over the diets which the author uses, we are struck with the fact that very little effort is made to measure the amounts of food, but as has been done so much in the past, emphasis is laid on the different classes of carbohydrate foods and their percentage of sugar content. The chapter on insulin is interesting, the author feeling that insulin should only be used in cases of severe diabetes, particularly those having acidosis. He speaks of coma and the amount of insulin necessary as 80-120 units. His final conclusions as regards the use of insulin are that it is to be used only in the presence of acidosis. He considers insulin a drug to be used in the same sense as digitalis, namely when the disease has progressed to the stage of decompensation. He has not seen any curative effects with the use of insulin, but on the other hand has seen patients require larger and larger doses as time goes on. All in all the little volume should be extremely useful to the French practitioner. W. H. O.

OPERATIVE CYSTOSCOPY. By E. Canny Ryall, F.R.C.S., Founder of and Senior Surgeon to All Saints' Hospital for Genito-Urinary Diseases, London. With 115 plates containing 670 original illustrations of which 528 are colored. St. Louis. C. V. Mosby Co. 1925. Price \$25.00.

The author says: "This book embodies the result of long and progressive work and is published in the hope that it may prove useful to others and stimulate youthful readers." That it will prove useful is beyond question, for it is not only the most comprehensive work on operative cystoscopy printed in any language but in the reviewer's opinion the nearest approach to clinical teaching that human hands have devised. No beginner can afford to be without it, and the older cystoscopist, no matter how pontifical, will find information of great value in its pages.

The first forty-seven pages are given up to a clear and concise description of the author's methods of anesthesia of the urethra, bladder and ureters and of the author's universal cysto-urethroscope and other instruments invented by him. This is followed by a detailed description, illustrated with drawings, of the author's diathermy apparatus and its application in the treatment of diseases of the urethra, bladder and ureters. The remainder of the book is made up of 115 plates containing 670 original drawings, 528 in colors, showing the character of growths found by the author in the urethra and bladder, and every phase of their treatment by diathermy or other methods.

The pages are 12½ by 8½ inches and hold six circular illustrations, 3½ by 3½ inches in diameter. On the opposite page is a descriptive text of the illustrations in English, French and German. If they offered nothing else but lessons in the three languages, their value in acquiring a working vocabulary would be very helpful. The colored drawings

are very beautiful and were made by the celebrated cystoscopy artist, Mr. Thornton Shiells.

Too much cannot be said in praise of this volume and it is highly recommended to all urologists, and especially to surgeons interested in the very latest and best in operative cystoscopy. A. R.

Propaganda for Reform

PERTUSSIN.—The reason the medical profession should refuse to prescribe Pertussin is not primarily because the stuff is advertised to the public, but that it is a product of indefinite composition, marketed under a nondescriptive, therapeutically suggestive name, and is exploited with misleading claims. Pertussin is one of many proprietaries which has been popularized through the uncritical testimonials given the physician. (*Jour. A. M. A.*, Feb. 20, 1926, p. 573.)

INNER-CLEAN.—Inner-Clean (Inner-Clean Manufacturing Company, Los Angeles) is claimed to assist nature and "Progressively and Thoroughly Cleanses and Rejuvenates Relaxed, Flabby Intestines." Those who order Inner-Clean by mail are sent in addition to the preparation, a leaflet advertising the "Mucusless-Diet Healing System." The "system" apparently is a book which sells for \$1.50. Examination of Inner-Clean in the A. M. A. Chemical Laboratory showed the product to be essentially a coarse herb mixture (with a little sand) consisting mainly of senna leaves. (*Jour. A. M. A.*, Feb. 20, 1926, p. 570.)

ACACIA AND INTRAVENOUS INJECTIONS.—The harmfulness of acacia in the treatment of shock and hemorrhage has been pointed out repeatedly. The changes resulting from the use of this otherwise inert agent bear on the many sided question of intravenous therapy. The investigations of Hanzlik have shown the wide changes which occur in the blood and tissues. Confirmatory of the work of Hanzlik, it was found that the blood after injection of acacia is definitely altered. The danger of intravenous injection of acacia has been fully demonstrated. The warning against acacia may be extended to other blood substitutes and in fact to intravenous injections in general. (*Jour. A. M. A.*, Feb. 20, 1926, p. 556.)

SANOCRYSLN.—In spite of the disappointing results from the use of "Sanocrysin" in animal tuberculosis in the careful experiments carried out for the Hygienic Laboratory by Theobald Smith, Wm. H. Park and E. C. Schroeder, it is possible that some renewal of interest may arise as a result of recent papers by European physicians on the use of sodium-gold thiosulphate in human cases of tuberculosis. One naturally views with doubt the value of these reports, since these physicians have discarded the theories originally advanced and, to a large extent also, the use of the antitoxic serum. They thus place the substance in the category of the gold salts used in the therapy of tuberculosis with which a long record of varied experiences is available. It is possible that the use of gold may have some value, but there is no evidence at hand today; hence the wisdom of American physicians in awaiting definite proof of action in animal tuberculosis before using it in the human disease will save much suffering and distress. (*Jour. A. M. A.*, Feb. 13, 1926, p. 487.)

ADMINISTRATION OF MERCURY AND ARSPHENAMINE.—The arspenamines are so reactive that they may not be combined in solutions with mercury salts for intravenous administration. Alternation of drugs, rather than simultaneous administration, is the present trend of antisyphilitic medication. Mercury compounds administered intravenously should be given more frequently and over a longer time than is permissible for the administration of arspenamine in sufficiently large doses. Furthermore, it is generally advisable not to give intravenous mercury medication, but to employ the forms such as the insoluble salts (or certain soluble salts) intramuscularly or to apply injections. (*Jour. A. M. A.*, Feb. 20, 1926, p. 572.)

FLORENCE FORMULA.—Florence Formula is another of the numerous alleged cures for hay fever and asthma sold on the mail order plan. It is put out by the Florence Product Corporation, Kansas City, Mo. The A. M. A. Chemical Laboratory reports that the "Florence Formula for Asthma, Bronchitis, Catarrh, Short Breath, Hay Fever and Allied Ailments" consisted of mottled, grayish white tablets and that each tablet contained the equivalent of approximately 0.18 Gm. of potassium iodine and 0.0007 Gm. of arsenic trioxide (equivalent to one minim of "Fowler's Solution"). From this analysis it is seen that the Florence Formula has essentially the same composition as another Kansas City medical mail order humbug, "Asthma Tabs," examined in the Association's Laboratory. (*Jour. A. M. A.*, Feb. 6, 1926, p. 435.)

GLUCOSE-DEXTROSE.—Legislation now under consideration in Congress aims to modify the interpretation of the federal Food and Drugs Act to that food products shall not be deemed adulterated or misbranded "because of having been preserved or sweetened with an article commonly known as corn sugar, also with an article known as fruit sugar or levulose." From the standpoint of nutrition and health, no reasonable objection can be offered to this proposal. It should be emphasized that in the new pharmacopeia "glucose" connotes the syrupy substance; the pure substance such as is used for treatment of hyperglycemia following a large dose of insulin is now described under the name dextrose (sometimes called d-glucose; formerly described also under the name anhydrous glucose). This may lead to confusion, as many physicians still speak of "glucose" injections, which under the new pharmacopeia are really "dextrose" injections. (*Jour. A. M. A.*, Feb. 27, 1926, p. 628.)

NATIONAL HEALTH SERVICE.—Some time ago the United States Public Health Service issued a warning that the "National Health Service," Washington, D. C., was attempting to capitalize the research work done by the United States government and to confuse the public into believing that it was in some way identified with the Public Health Service of the government. The offices of the National Health Service are no longer in Washington, D. C., but in New York City. The concern is either operated from two addresses—17 West Sixtieth Street and 70 Fifth Avenue—or there are two concerns of the same name. From the first address a so-called "Book of Health," a urinalysis "health service" and a line of fad foods are sold. From the Fifth Avenue address letters are sent to industrial concerns urging them to purchase "a remarkable discovery for kidney disease, which has produced unbelievable results even in extreme cases where all other means have failed." An analysis of Rensano made in the A. M. A. Chem-

ical Laboratory confirmed by pharmacologic tests carried out at the University of Illinois showed that Rensano is essentially milk sugar with a minute amount of alcohol. This inert and therapeutically worthless product is exploited to individuals and industrial plants with the suggestion that working men suffering from such serious conditions as nephritis and diabetes should be given this product in lieu of medical attention. (*Jour. A. M. A.*, Feb. 13, 1926, p. 502.)

BURGESS-JOHNSON-WEBB SYNDICATE OF FRAUDS.—On Feb. 11, 1926, the Postmaster General issued a fraud order against a group of medical mail-order swindles conducted by Ward H. Webb, W. W. Burgess, and Linn D. Johnson, who conducted the Gray Advertising Agency, Kansas City, Mo. As the Dale Laboratories they sold "Virex," a fraudulent cure for deafness, a fake cure for "stomach trouble"—Dale's Wonderful Stomach Remedy—and a kidney cure humbug, "Dale's Kidney Prescription." Under the trade name of King's Laboratories they sold a pyorrhea cure swindle. As the Hilton Laboratories they sold "Hilton's Vitamines to Make You Fat." As Warren Laboratories they sold "Clear-Plex" and other fake beauty preparations. As the Webb Chemical Co. they sold a fraudulent cure for asthma, the "Famous Webb Combination Prescription." As Walker Institute they sold "Walker's Prostate Specific," exploiting those with prostate trouble. As the Restorex Company they sold "Restorex Tablets"—a weak-man remedy, while they sold a fake rheumatism cure—the "3-Way Combination Treatment" under the name of the 3-Way Chemical Company. These are but a few of the twenty-seven schemes operated through the mails by this group. The Solicitor's memorandum shows that the preparations were made for them by George A. Breon & Co., of Kansas City. It was brought out that Burgess, Johnson and Webb had no medical training, and none of the "laboratories" were laboratories in fact. (*Jour. A. M. A.*, Feb. 27, 1926, p. 641.)

PELLAGRA SECONDARY TO LESIONS OF STOMACH INTERFERING WITH NUTRITION

An interesting side-light is thrown on the subject of pellagra by the occasional appearance of the disease in patients with faulty food utilization due to some gastro-intestinal lesion. Three such cases are reported by William L. Bender, San Francisco (*Journal A. M. A.*, April 25, 1925). Pellagra developed in one of these patients during a period of jejunal feeding necessitated by deformity of the stomach by a benign ulcer, and in the other two cases during progressive carcinomatous pyloric obstruction. Only two similar reports have been found in literature. In each of these three cases, pellagra developed after the stomach lesion had seriously interfered with the passage of food for some time. In one case the disease developed during the course of duodenal feedings with good animal protein content, improved when this was increased, and disappeared on a general diet by mouth. Surgically relieving gastric retention, in the second case, and permitting a full diet resulted in improvement of the pellagrous condition, though the patient was dying of cancer. The trial of improving the diet was impossible with the third patient, who died two weeks after operation. In these three cases of this report, the only apparent cause for pellagra was the interference in nutrition, another piece of evidence in favor of the dietic origin of the disease.

CONTROL OF INTRACRANIAL PRESSURE

The method of administration of magnesium sulphate that Temple Fay, Philadelphia (*Journal A. M. A.*, April 25, 1925), has employed in cases of increased intracranial pressure is as follows: Magnesium sulphate, if properly administered, will definitely reduce intracranial pressure within a few hours. Reduction of pressure may be maintained by its repeated use over a period of weeks. Acute pressure phases seen in traumatic head injuries can be adequately combated so that decompression for pressure has been found unnecessary in this hospital for the last three years. Magnesium sulphate is given as a routine in all intracranial injuries, with the exceptions noted below. Results have shown that the reduction of brain volume is greater and more satisfactory than the limited possibility offered by subtemporal decompression for pressure, and obviates the necessity of further shock from operation or a resultant cranial defect, should the patient survive. The effect of magnesium sulphate by mouth or rectum is simply a mechanical means of dehydration of the entire system, including the ventricular fluid, and is an offset to brain edema. It is necessary, therefore, to restrict carefully the patient's fluid intake during the period of dehydration. In cases in which no myocardial involvement exists, the pulse rate may be considered a fair index of the blood volume available for circulation. Magnesium sulphate should never be given in the presence of shock (i. e., low temperature and rapid or rising pulse), for to deplete a vascular system already impoverished will be disastrous. In a certain recognized group of cases in which intracranial injury has been severe, relief in any form is of no avail. In general, the respiratory rate if below normal (20) or irregular may be considered as an index of the presence of intracranial pressure and indicates dehydration. The temperature is of value in the early stages of observation to determine the period of shock. Records of the pulse, temperature and respirations should be kept every fifteen minutes during the acute phase, along with blood pressure readings at half hour intervals. It has been said that "the dose of a drug is just enough," and this is particularly true of magnesium sulphate. The average dose consists of $1\frac{1}{2}$ ounces (42 gm.) of crystals in 5 ounces (150 c.c.) of water by mouth, repeated, if necessary, at the fourth hour; or in cases of vomiting or stupor, or in children, rectal administration, 3 ounces (90 gm.) of crystals in 6 ounces (180 c.c.) of warm water, inserted by means of a soft rubber catheter and given slowly to avoid the effect of an enema. A dose expelled within half an hour should not be considered as having been given. The dose should be repeated at the second hour, if necessary, adequately to reduce intracranial pressure. No toxic effects have been observed in a large number of cases.

SPONTANEOUS RECURRENT ABORTION

Arthur H. Curtis, Chicago (*Journal A. M. A.*, April 25, 1925), says that the three patients who have been studied in this work introduce two common factors of interest: First, all had lesions that offered easy portals of entry for fresh infection, and, secondly, all suffered from kidney disturbance. It appears that all three experienced frequent renewal of infection, suggesting that the occurrence of spontaneous abortion tends to be dependent on fresh exacerbations, rather than on dissemination from low-grade chronic foci. Spontaneous abortion is relatively frequent in patients who are free from syphilis and have no gross abnormalities of the pelvic organs. Three barren patients with a pronounced history of habitual abortion all revealed active foci of in-

fection with associated kidney involvement. Two have borne healthy children since relieved of their infections; the third with a history of eleven abortions, is now well and is nearly six months pregnant. Intravenous injection of numerous pregnant rabbits with fresh cultures of hemolytic streptococci, obtained from these patients, has invariably resulted in prompt termination of pregnancy. Control experiments suggest that other virulent bacteria do not possess such a high degree of specificity. Focal infections with a tendency to fresh exacerbations appear to be an important cause of otherwise inexplicable spontaneous abortion in women. Repeated inoculation of susceptible patients with bacterial from the oral cavities of human carriers of infection may also be a factor. Low-grade chronic foci are probably a less serious menace to the growing fetus.

SUBTOTAL GASTRECTOMY

Subtotal gastrectomy in the opinion of John B. Deaver, Philadelphia (*Journal A. M. A.*, Nov. 21, 1925), is the operation of choice in benign disorders of the stomach and duodenum, chronic ulcer, its sequelae, hourglass stomach, pyloric stenosis and secondary or marginal ulcer. The rationale of subtotal gastrectomy for gastric ulcer, duodenal ulcer and early carcinoma is the removal of the pathologic condition, along with the acid-bearing portion of the stomach, thus materially lessening, if not preventing, the sequelae—future ulcer formation, which too often follows the more palliative and less radical operative procedures. In Deaver's experience, the hyperacidity which is a feature before operation is much reduced, and may even be entirely absent after a subtotal gastrectomy, as shown by the fractional test meal. Furthermore, he has never seen marginal ulcer follow subtotal gastrectomy for early carcinoma. Deaver emphasizes the fact that the problems as to etiology, as to course, as to healing, as to change in the physiology of the stomach, and as to treatment are all in an opinionated state. The experimental evidence to date is subject to many ifs. Many of the clinical reports are valueless.

ACHLORHYDRIA PRECEDING PERNICIOUS ANEMIA

The case reported by Mills Sturtevant, New York (*Journal A. M. A.*, Nov. 21, 1925), is of more than fourteen years' duration, from the time of known achlorhydria to the onset of the symptoms of pernicious anemia. It is reported to be of longer duration than that of any case on record. This patient's symptoms of achylia began in 1899. In 1900, he was told he had achlorhydria. The sore mouth began in 1915. It was discovered that he had pernicious anemia only in 1916. It seems conclusive that the achylia had lasted over fourteen years when the anemia developed.

PROSTATITIS OF NONVENEREAL ORIGIN

Theodore Baker, Pittsburgh (*Journal A. M. A.*, Nov. 21, 1925), asserts that prostatitis of nonvenereal origin is much more common than is generally known. It represents between 15 and 20 per cent, of all cases of this disease. Its recognition is important; (1) from the sociological and economic standpoint of the patient; (2) in its relation to prostatism, and (3) in regard to its etiology. Many cases are undoubtedly due to distant foci of infection, as sequelae to the acute infectious diseases. Because of the obscure etiology of many cases, further study of this phase of the subject should be stimulated. Relapses are characteristic of the disease, these cases being more resistant to treatment than are those due to the gonococcus. Therefore, successful treatment depends on the finding and the removal of the underlying cause, if possible.

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ORIGINAL ARTICLES

CANCER OF THE VULVA

E. D. TWYMAN, M.D.
AND
CHAS. S. NELSON, M.D.
KANSAS CITY

Carcinoma of the vulva is not of frequent occurrence, but it bears a very bad reputation. Epithelioma is the usual tumor, histologically various; prognosis, unfavorable. It is not easy to know the true incidence of tumors in this situation because of concealment and of infrequent case reports. Different authors make estimates varying from one-tenth of one per cent. to ten per cent. in ratio to all female genital tract cancers. A study of the diagnosis files at the Kansas City General Hospital shows that from January, 1920, to November, 1925, there were exactly 100 malignancies of the female genital organs observed. Of these there was just one case belonging in this study; No. 4327, service of Dr. James Henderson, a carcinoma of the clitoris. Only nineteen cases could be found in the records of all service of John Hopkin's Hospital¹ since its opening, whereas the epitheliomata of the cervix alone in the same time were forty-two times as many.

This study seems to give a true cross-section of experience and establishes a comparatively low rate of incidence. Therefore, I venture to report on six personal cases of this rare condition, particularly in order to include one case which is nearly a literary record, and to use it in support of the theory that the prognosis of these tumors need not be so hopeless as at present seems the case.

By letter and verbal enquiry I collected reports on nineteen other cases seen by members of the Kansas City Academy of Medicine.

Present literary prognosis. Most authors agree on the extreme malignancy and bad prognosis of cancer of the vulva. I will quote Robert Tilden Frank² since he expresses well the typical view. He says, "Vulvar carcinoma is notorious for its malignancy and frequent recurrence after operation."

The author then recites the life history of a tumor which kills by local growth and erosion and not by generalized dissemination. By fair analogy with similar growths in other situations, it should not carry such an extreme high mortality. Taussig³ theorizes to the same effect and reports three of nine cases still well after five years. Therefore, he thinks that 30 per cent. of these cases can be cured. He ad-

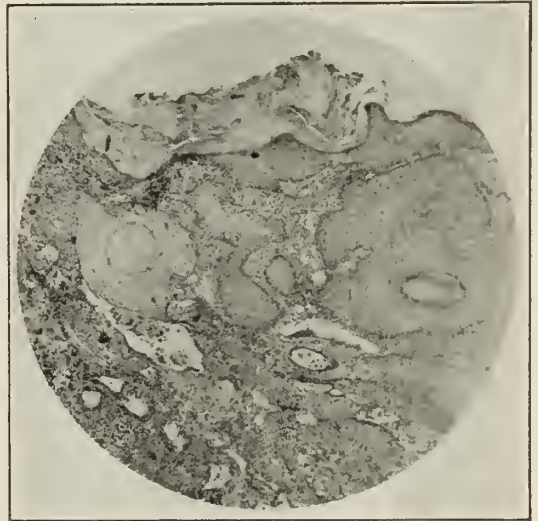


Fig. 1. Well differentiated epithelioma, hornification and pearl formation. Round celled infiltration. Prognosis should be good.

vises only very radical surgery, radium or X-ray. His personal experience with X-ray alone is not good. I am in sympathy with this more optimistic view and will try to justify it and orient the theory to the contrary seeming facts.

Notwithstanding my personal view, one should quote Ewing⁴ who is just as pessimistic as R. F. Franks; he admits that some cured cases may not be in the literature, but he says that Dittrick in a careful search was not able to find the record of a single case that was alive in its sixth year. This apparently overlooked the case of Fraenkel⁵ which was operated on three times and survived twenty-four years. Fraenkel's case seems to be the literary record.

He also overlooks a report by A. H. Lewers⁶

and its discussion by Boyd and by Spencer. Together they reported eight cases well nine months, three years, six and three-fourths years, eight years, nine years, nine years, eleven years and thirteen years after operation.

Age of onset. These patients are usually over fifty years of age, although one has been reported at fifteen years and one at twenty years of age.

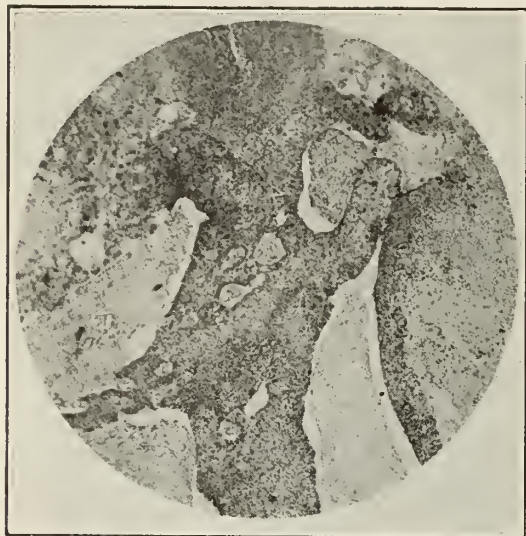


Fig. 2. Poorly differentiated cell type. Prognosis unfavorable.

Preceding conditions. Leukoplakia, pruritis, kaurosis and condylomata acuminata are conditions reported preceding the cancerous one; similar to pre-epitheliomatous conditions elsewhere, and the previous duration of these precancerous conditions is sometimes very long. The first appearance may also be on a thickened fissured epidermis, a localized papule or a wart. Some authors go so far as to consider leukoplakia as always being a precancerous stage. This seems to be an over statement, but it is true that the probability of cure diminishes progressively with each stage of involvement. It is bright when a precancerous condition is operated; fairly bright when a very early local lesion is operated; less bright if the lesion is late although still local; serious if the superficial inguinal glands only are involved; desperate if the deep femoral glands have become involved; hopeless if the pelvic glands have become involved. Unfortunately the progression is not always orderly and one may observe rapid transition from the early hopeful to the late hopeless stage.

Classification. Taussig classified three clinical forms: 1, diffuse hard infiltrations; 2, cauliflower growths; 3, indurated ulcerations.

He also distinguishes clinically a difference in the prospects between the everting and in-

verting type of growth, the prospects of the latter being less favorable. This observation is also of value in tumors situated elsewhere.

The usual sites of appearance are the labium majus, the interlabial fold, the clitoris, the urethra, other parts of the vulva, and rarely the Bartholin's⁷ gland or duct. I think probably Bartholin's gland cancers, vaginal and urethral cancers and melanomas should not be included in this study because of differing histology and course.

Histologically these tumors are epithelioma and both Frank and Ewing record the appearance of solid masses or long cords of cells, an unrestrained proliferation. Both basal and squamous cell types are seen, and of the latter both undifferentiated and adult types occur. The adult types with hornification and pearl formation are the ones I have seen in at least four of my cases.

At a late stage of the disease, unfavorable anatomy will absolutely determine the course and outcome of the case and it will be bad; but at an early stage with proper attack the histology of the tumor should govern the outcome. Histologically the growths are often of a type which would not ordinarily indicate excess malignancy, i. e., they are, as stated by Ewing, Frank and Taussig and also as found in four of our personal cases, rather well differentiated growths, with stratification and pearl formation and a zone of surrounding round cell infiltration and deposit of fibrous tissue.

The matter of the free lymph and blood supply has already been mentioned, and in the unoperated state it is also possible to imagine that the ever present moisture and bacteria infected vaginal discharge is an unfavorable influence.

In reporting six personal cases, I know that the number is too small upon which to base any conclusive argument. Even the one case that approaches the literary record by reason of living eight and one-half years before the recurrence of the growth and its hopeful removal does not prove any rule. But it does serve to fortify to an extent the idea which theory presents, i. e., that so unfavorable an outcome for so well differentiated a class of tumors may rest on additional factors besides the ones mentioned and that some of these factors are avoidable.

At this point I will express my thanks to Drs. A. E. Hertzler, Richard L. Sutton, M. A. Hanna, Ernest Robinson, Howard Hill, Frank Hall, J. G. Montgomery, Frank Teachenor, O. H. McCandless, Eugene Hamilton, Lee Miller, H. P. Kuhn, B. F. Sulzbacher, for their kind replies to my enquiries, and to Dr. H. R. Wahl for the laboratory reports so kindly furnished to the author on his personal cases.

Dr. Ernest Robinson kindly allows us to make use of a good photograph and slide and

reports two cases, only one of which can be included in this study, as the other is a case of cancer of the vagina.

REPORT OF CASES.

Case I. Mrs. A. M. H., patient of Dr. Ernest Robinson, age 53 years, menopause at 43. She gave the history of having had a vaginal hemorrhage of moderate severity one year and a half before admission to the hospital. She had a vaginal discharge since that time but no pain. Ten months ago was told that she had a vaginal tumor. The day previous to entering hospital she suffered a severe hemorrhage and lost much blood.

Physical examination showed vulva and vagina filled with a large fungoid bleeding growth which arises from the right labia by a pedicle two and one-half inches long and one inch wide. The growth was removed by cautery in August, 1924, and to date has had no signs of recurrence.

Dr. O. H. McCandless reports cases No. 2, 3, 4, and 5, all terminal and fatal. He says: "I had four cases, they were all (a) seen late in the first year of disease; (b) inguinal adenopathy and discharge existed; (c) quack salves and serums had been used in two—one postoperative case had belly nodes. One had been treated with X-ray only. None lived more than one year after first observation by me. Cured none. No pathological sections made. My treatment 'raw' X-ray to lesion and filtered ray to abdomen. All dead. (Several papilomata and one lymph angioma treated successfully with X-ray)."

Dr. Richard L. Sutton had seen and treated all six of my patients reported below.

Case 6. Dr. Minford Hanna reports one case. A late well involved case. He declined to operate. Death soon followed operation elsewhere.

Dr. C. C. Dennie reports cases 7, 8 and 9. Cases seven and eight were terminal and hopeless, although one of them had survived an original operation removing the local tumor and a later operation removing the inguinal glands, for about two and one-half years altogether. Case nine, a late case, had both inguinal glands involved besides the labial masses. Case adjudged hopeless, treatment refused.

Dr. Lee Miller reports one case, terminal and fatal.

Case 10. Age 75. Bilateral labial and skin and inguinal involvement and ulceration. Duration one and one-half years. Declined to operate. Palliative treatment. Death in two weeks.

Dr. Teachnor had one suspected case which proved to be esthomin.

Dr. B. L. Sulzbacher reports two cases.

Cases 11 and 12. These cases refused treatment and Doctor does not know the outcome of either.

Cases 13 to 18 inclusive. Dr. Hertzler reports having had six cases; two were seen early with no inguinal involvement and in these good results were obtained. Two with inguinal involvement in which block dissection of inguinal glands was done, recurrences were later recorded, and two cases from which no post-operative reports were obtained. He does not say how long the two cases with favorable results were traced.

Case 19. Dr. E. H. Skinner reports a case surviving nearly two years, X-ray treatment only.

Dr. Elmer D. Twyman and Dr. Chas. Nelson report six cases.

Case 20. B. E., para one, age 55, presented recurrent nodular type epitheliomatous masses of the right labial region, and of the right inguinal glands. Total duration of tumor sixteen months. Origin from a nodule noticed several months previously. Sharp knife dissection elsewhere six months ago.

Prompt recurrence. Pain a major factor causing urge for treatment. Risk explained and likelihood of failure, family summoned and concurred in request for attempt. It was with the greatest difficulty that the operative effort was carried to a point that seemed to comprehend the limits of the growth anatomically, but the patient was not able to withstand it and died of surgical shock fourteen hours later. This case is typical in the facts of long concealment of the growth, inadequate sharp removal, recurrence with involvement of deeper tissues, in-



Fig. 3. Carcinoma of vulva and clitoris. Courtesy of Dr. Ernest Robinson.

advisability of secondary operation due to involvement of deep structures, and fatal outcome in a badly depleted patient.

Case 21. Mrs. M. F., para three, age 70, had noticed ulceration of the labia eight months on a leukoplakia base. She presented ulceration of the left labia majora about one inch long and one-half to one-third inch wide, extending upward and involving the clitoris. The mass was thoroughly indurated and fixed and there was a palpable involvement of the left inguinal glands. A short preceding intensive course of radium treatment by Dr. Sutton had produced a reaction and the fixation was lessened. The cautery removal was extended to include the labial structures, the clitoris, and the left inguinal and Scarpa triangle glands. Operation was done under gas and was well tolerated. Section report showed No. 3 Broder's⁶ type, not very well differentiated. A liberal sloughing of surrounding tissues followed and healing was slow, requiring about six weeks. Radium was applied during the recovery period by Dr. Sutton. Patient continued well and gained weight and strength for eight months, then she began to have pain deep in the pelvis and in three months, or eleven months from the time of the original operation, she died of deep pelvic involvement.

Case 22. Miss E. B., virgin, age 39, presented a very extensive involvement of both labia on a leukoplakia base. Duration of the leukoplakia several years, duration of the tumor before treatment three months. The growths were of the cauliflower type everting growth but nevertheless the cautery dissection which was a complete bilateral dissection including the clitoris followed obviously infiltrated tis-

sue upward into the inguinal gland regions and they were also dissected. Section showed a No. 2 Broder's type fairly well differentiated. Radium was used by Dr. Mella during the healing period and recovery was without event. The patient continues well and strong and without sign of recurrence to the present time, twenty-one months after operation. It is too early to say what the final outcome will be.

Case 23. Mrs. C., age 45, para two, presented four inverting epitheliomatous ulcers on a bilateral extensive leukoplakia base. The latter had existed three years, and the first appearance of the malignant growths seems to have been of the everted type. Delay and concealment occupied five months time, but the breaking down of the everted growths into ulcers and their rapid extension caused her to seek treatment. Cautery dissection of both labia and of the clitoris was so extensive that it was not considered best to do the gland areas also at one sitting, and further operation was declined for economic reasons. Dr. Wahl made section showing No. 2 Broder's type epithelioma. However, radium was applied by Dr. Sutton during the recovery period and healing was uneventful. Two years and six months later the patient is without recurrence, and in good health. It is too soon to say what the final outcome will be.

Case 24. Mrs. K., para four, age 74, presented a hypertrophic everted type growth of the left labia major only. The right labia and the clitoris were not involved. The patient was obese and her cardiac condition was considered to contraindicate a general anesthesia, the dissection including the entire left labia and the left inguinal gland region and fat in one piece. Recovery was uneventful and the patient continues well three years and five months later. Considering the well differentiated type of this everted growth shown by section she has relatively good prospects.

Case 25. Miss C., a virgin, age 63, alive after eight and one-half years. Presented a small, one-half inch diameter shallow inverting epitheliomatous ulcer with the following history. For three months had had noticed itching of the labial tissue and dryness without skin change. Finally she noticed a slight elevation or nodulation of the right labia which increased in size and then lost its epithelial covering, forming an ulcer. At least one enlarged gland could be palpated in the right groin.

Operation was done under local anesthesia and frozen section showed a well differentiated epithelioma. The entire right labia was removed and the right inguinal and Scarpa triangle glands were thoroughly dissected, but sections did not show any malignant cells in the removed glands. Healing was very slow, probably due to lymphorrhoea. Radium was applied postoperatively by Dr. Richard Sutton. The patient co-operated and was under observation almost continuously. Our overanxiety about a recurrence caused the removal, five months later, of a small local swelling; but section proved to be merely an enlarged sebaceous gland. There was no further positive finding until July, 1925, when an innocent appearing abrasion or ulceration in the old scar line took on the characteristic heaped up edge and granular look of epitheliomatous ulceration. Radium was applied but without checking the growth and an operation was performed under gas early in September. A very radical cautery removal was done, the patient tolerating it nicely, and healing is progressing slowly but well. Section showed that it was a well differentiated epithelioma.

Without the recurrence, late as it is, one would have some misgivings about the original diagnosis in this case, but now one has no doubt.

Case 26, was a Miss M. T., Kansas City General

Hospital No. 4327, age 38, operated May 9, 1920. She presented a cauliflower growth, size of walnut projecting from the clitoris. It was a soft structure, bleeding easily and tender to touch. She had first noticed it three months previously. It grew slowly during this time. Urethra was not involved. Operation was done under ether and sharp dissection. The wound was closed with cat gut, patient leaving the hospital fourteen days later. There was no section made and no follow up report. The patient could not be traced at this time.

DISCUSSION

Considering the histology, results such as this and the ones reported by Frankel, Taussig, Lewers, Boyd and Spencer should be more frequently obtained. It seems that these favorable results are overlooked by many authors and that they should be known and appreciated. The favorable factors that are present in a certain proportion of cases justify this view. They are, first, a cell type which in other situations speak for a slow growth and a favorable prognosis for operative work. Second, early presentation due to an intelligent patient and no false modesty. Education can increase this advantage. Finally, radical type of removal.

We are now in a position to theorize. Eight of these cases, one-third of the number collected from Kansas City sources, are found to have results above the average; and this occurred in the cases that were subjected to an early attack, and radical procedure. What would happen if all these cases were seen early? If less time were wasted in palliative treatment, and if the cautery were used to prevent cell implantation and to reseal the uninvolved spaces that are operatively opened, and if the surgical attack, instead of being timid and half hearted, and expectant of failure, should take courage from the favorable histology and be planned radically as in breast and lip cases and based on an expectation of success? Might not this attitude score an assist in the greater courage it would give to the patients, who would come for treatment at a hopefully earlier time.

These cases appear to have suffered as much from concealment and from timidity of attack, both of which are factors that can be changed, as they have from their unfavorable situation, which of course cannot be changed.

Some excuse for this condition is found in the comparative rarity of the cases and the dread inspiring reputation they bear. Taussig says in part: "Systematic education of the laity regarding the significance of pruritis and small ulcers about the external genitals will doubtless aid considerably in the early recognition and treatment of the disease. Of even greater importance, however, is the education of the medical profession on this subject. * * *. We may hope for a reduction in the mortality from vulvar cancer when both the

laity and the profession awaken to the importance of excising the vulva in the precancerous stage of leukoplakic vulvitis. Excision at this stage will produce almost 100 per cent. cures and we may hope for a material decrease in the death rate through operation at this early stage."

One may conclude, that through pessimism we have failed to an extent in our duty of lay education and in our own practices. This study suggests a more hopeful attitude and procedure.

1812 Federal Reserve Bank Bldg.

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PHYSIOTHERAPY IN ORTHOPEDIC SURGERY

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Physiotherapy may be defined as the use of natural agents, such as rest, muscular exercise, heat, cold, massage, light, and electricity, in the treatment of disabilities and disease. The meaning of the term orthopedics is to make children straight, but as at present practiced orthopedic surgery is that branch of medicine which is concerned with the organs of movement and its field is thus largely limited to the spine and extremities, but is by no means limited to children. As the orthopedist is concerned primarily with the restoration of function, the various forms of physiotherapy probably comprise a more important part of his armamentarium than they do in that of any of the other medical specialties.

The types of physiotherapy used by the orthopedic surgeon are those which are believed to exert a beneficial influence on the patient as a whole and those which can be applied to the muscles, joints, bones, nerves, blood vessels, and connective tissues of the spine and extremities. Arranged in the order of their usefulness they are: 1, rest; 2, muscle training and exercise; 3, heat and cold; 4, passive movements and stretching of contracted tissues; 5, massage; 6, sunlight and artificial light; 7, electricity, X-rays, and radium; 8, occupational therapy.

The old shotgun prescription in which it was hoped that one or more of the numerous ingredients would benefit the patient, is a thing of the past and modern medicine is gradually get-

ting away from all empiric therapy. Just as the modern physician uses a given drug to produce a definite effect, so should he use the various physical agents in an intelligent manner. The difficulty is that the actions of many physical agents are gradual and the effects are obtained only after prolonged use. Consequently, it is often difficult to judge what part the physical therapy actually played in obtaining the ultimate result. Furthermore the actions of drugs can be studied by animal experimentation, but studies of the actions of physical agents on the various laboratory animals are as a rule very difficult and unsatisfactory procedures. Consequently much of our physiotherapy today is more or less empirical and its use is justified only by past clinical experience.

It is because our knowledge of the actions of many physical agents is so hazy and because the more spectacular forms, such as cabinets of various colored lights, static machines, and the X-rays, are so impressive to the laity, that they form such a ready tool in the hands of quacks and charlatans. Let us now briefly inquire what the orthopedic surgeon hopes to accomplish by the various natural agents which he uses and how they may be applied.

Rest is used to enable torn and damaged tissues to heal, to protect paralyzed or weakened muscles from strain, to combat infections, and to conserve the general metabolism. General rest is accomplished by rest in bed or curtailment of activity, and local rest is accomplished by means of bandages, adhesive tape, and splints or braces of metal, leather, plaster of paris, or other materials.

Muscle training and exercises are used to prevent muscle atrophy, strengthen weak or paralyzed muscles, promote useful coordination of various muscle groups, prevent adhesions and contractures, increase the range of motion in stiffened joints, correct postural defects and improve the body mechanics and to improve the general health of the patient. They may be done with assistance, alone, or against resistance. To be useful the exercises should be prescribed for a definite purpose and should be taken seriously by the patient and by the physician. In exercising paralyzed muscles it is important that fatigue of the muscles be avoided.

Heat may be dry or moist and may be applied locally or to the body as a whole. Objectively local heat causes dilation of the blood vessels and increase in the vascular exchange. Subjectively it often relieves pain. Local heat is used to localize acute infections, relieve pain, promote the absorption of exudates and to increase the circulation in a part. It is a valuable adjunct in the treatment of stiffened joints and adhesions around muscles and

tendons. Preliminary heating of the tissues makes massage more efficient and enables paralyzed muscles to contract more readily. The primitive method of obtaining dry heat is by means of a bag of hot sand, a hot brick or iron wrapped in flannel and applied to the part, but nowadays it is usually applied by means of a hot water bag, an electric pad, a radiant heat lamp, a gas or electric oven, or by means of diathermy. General dry heat is used to combat shock and is most easily applied by means of hot blankets. Moist heat is obtained from hot poultices, stoups or soaks. Moist heat to the entire body is sometimes used in the treatment of chronic arthritis. It is applied by steam cabinets or hot baths.

Cold causes contraction of the blood vessels and decrease in the blood flow in a part. It is used to avert suppuration, to lessen swelling and ecchymosis, and to relieve pain. It is applied by means of ice bags, cold packs or basins of cold water. Scottish douches or contrast baths of hot and cold water alternately cause first dilation and then contraction of the blood vessels. They are useful in circulatory disturbances of the extremities. The simplest method of applying the contrast bath is for the patient to provide himself with a bucket of hot and one of cold water and to shift his foot or hand from one to the other every two minutes.

Massage is used to promote the absorption of exudates, to relieve pain, to stretch scars and adhesions and to increase the flow of blood in paralyzed muscles. General massage is very soothing to the patient and stimulates the circulation. The efficiency of massage varies directly with the skill of the masseuse. The four types are effleurage, petrissage, tapotement and vibration. Effleurage is the stroking of the skin first lightly and then more vigorously with friction. Petrissage is a kneading of the muscles and deeper tissues. Tapotement is striking the part, and vibration is a form of rapid tapotement which is best done with an electric vibrator. As a rule massage is done in the direction of the venous channels. When massage is followed by pain it is either being done improperly or should not be done at all and should be discontinued.

Passive movements and stretching of contracted tissues are used to increase the range of motion in joints, to stretch and break up adhesions and to stretch contracted scars, muscles, and connective tissues. They may be done manually or by mechanical appliances many of which are very elaborate. As a rule very gradual stretching is more efficient and lasting in its effects.

Sunlight and artificial light is used chiefly in combating chronic infections, especially tuberculosis and osteomyelitis, and for the curative

effect on rickets. The action seems to be a general increase in the patient's resistance rather than a local one. Heliotherapy to be effective must be strictly supervised and prolonged over a long period without interruptions. A simple method is to divide the body into four zones and to expose the first zone (feet and legs) five minutes on the morning and again in the afternoon of the first day. On the second day the first zone is exposed ten minutes and the second zone (thighs) is exposed five minutes. The area and time of exposure are increased at the rate of one zone and five minutes daily until the patient's entire body is exposed to direct sunlight for forty-five minutes, front and back each morning and afternoon. Each exposure should be followed by an air bath of equal length. If the sun is not available the quartz mercury vapor lamp may be used locally over the diseased tissues.

Electricity is not used as extensively as is generally supposed. The continuous galvanic current of high voltage and small volume is used for diathermy. The advantage claimed is that the resistance of the tissues results in the production of local heat in the deeper areas. The faradic current is used to replace the normal nerve impulse and cause contractions of paralyzed muscles. For diathermy a special apparatus is necessary and the faradic current is usually obtained from a Bistow coil. X-rays and radium are not used by orthopedic surgeons as therapeutic agents but patients with malignant tumors are usually referred to specialists in the use of these agents.

Occupational therapy is a further step in the treatment of disabilities of the muscles and joints by exercises and mechanical devices, but is by no means a substitute for them. In addition to the local effect upon the extremity it is beneficial to the morale and mental attitude of the patient, and in many instances teaches him a trade which makes him more productive than he was before his injury.

It is seen then that we have a wide variety of physical agents at our command and that there is room for a considerable range of choice as to what agent or combination of agents we shall use in any given case. Now we shall consider very briefly some of the types of cases which apply to the orthopedic surgeon for relief and what forms of physiotherapy are indicated in the treatment.

Polio-myelitis. In the acute stages the muscles, whether affected or not, should be put at as complete rest as possible. The rest and immobilization should continue in the case of the paralyzed muscles until the tenderness has disappeared. It is best obtained by rest in bed with plaster casts or splints on the extremities. After the tenderness has disappeared active

physiotherapy is started in the form of dry heat, followed by massage and muscle training to restore the power to the paralyzed muscles. The muscles must not be overworked and fatigued and must be protected from stretching by splints or casts.

In spastic paralysis we have both weakness of certain muscle groups and over activity of others with resulting incoordination and contractures. Each case is a problem in itself and the treatment can be outlined only after a very careful physical examination. The indications are to stretch the contracted muscles and to build up the weak muscles. Exercises are also given whose aim is to develop coordination and to educate the muscles to perform movements of gradually increasing complexity.

In peripheral nerve paralysis the paralyzed muscles should be maintained in a position of moderate relaxation and stretching should be avoided even during active treatment. To prevent atrophy while the nerve is regenerating the muscles are massaged and may be stimulated with the faradic current. For the causalgias we try various forms of heat but here the results of physiotherapy are usually discouraging, and we soon resort to surgery.

The use of physiotherapy in the treatment of fractures has been the practice in some clinics for many years, and now its value in these cases is becoming more generally recognized. The purposes of such treatment are to hasten union, decrease muscle atrophy, and maintain a wide range of motion in the neighboring joints. Local heat and massage are used to hasten union. Muscle atrophy is lessened if the patient is taught to actively contract and relax the regional muscle groups a certain number of times daily. This can be done while the extremity is immobilized. After union is sufficiently firm to permit motion gentle passive and active movement of the joints above and below the fracture should be practiced. The above is much more important in older patients than in young adults and children. In children the joints and muscles quickly return to normal as soon as function is resumed, and early motion particularly in fractures near joints is apt to be distinctly harmful.

In a congenital dislocation of the hip which after reduction has been encased in plaster in a position of abduction and external rotation over a period of months it is often a difficult problem to bring the limb back to a position of function and to restore motion in the joint. For this purpose the hip is first heated preferably with bags of hot sand or a baker, then massaged and stretched, while the child is encouraged to move it, and later to walk in increasing amounts. A somewhat similar prob-

lem often confronts us in adults who have had traumatic dislocations or sprains followed by pain, stiffness, and impairment of function. Here the treatment is roughly along the same lines.

In scoliosis and postural defects the treatment is supplemented by active muscular exercises so guided as to build up the general health and correct faulty body mechanics. The same is true in the treatment of the various deformities and disabilities of the feet.

In the treatment of chronic infections of the bones and joints in general and in tuberculosis in particular, the most important natural aids are rest and sunlight. Astonishing results are now being reported from various heliotherapy centers. It is still a moot question as to how much immobilization and freedom from weight bearing should be prescribed, but all are agreed that intensive heliotherapy prolonged and uninterrupted over a period of years if necessary is the most important factor in the successful conservative treatment of bone and joint tuberculosis. It is also an important adjuvant in the surgical treatment of the lesions. Where heliotherapy is impracticable we may use a quartz mercury vapor lamp and many are convinced that they are definitely beneficial.

Chronic arthritis and fibrositis is one of the most fertile fields for the exploitation of various physiotherapeutic measures and not infrequently the methods used in attempting to relieve the unfortunate victims of these conditions are entirely empirical and sometimes they verge upon quackery. In general we may divide chronic arthritis into the hypertrophic, nonankylosing osteoarthritis and the rheumatoid or atrophic arthritis deformans. In the hypertrophic type there is no danger of ankylosis and the muscle atrophy is not marked. The joints need rest and support with protection from strain and injury. To relieve the pain, hasten the absorption of exudates, and restore motion, the joints are subjected to dry heat and massage. Bursitis and the referred pains which are diagnosed neuritis, are often associated with this type of arthritis and demand similar treatment.

In the atrophic type there is marked muscle atrophy and a tendency to the development of contractures and deformities. Locally these patients need local heat to the joints and muscles followed by massage and gentle voluntary movements to preserve the muscle tone and the joint mobility. Contractures are avoided by splinting. In both types it is to be recognized that the arthritis is a general condition of unknown etiology and for which there is no specific therapy. Hence in treating the patient we do everything possible to improve the general health. Not a small factor in this

is a regime of rest and heliotherapy alternating with breathing and trunk exercises to increase the lung capacity and correct faulty body mechanics.

In closing I wish to emphasize that physiotherapeutic procedures should not be empirical or prescribed in an offhand manner. They should be undertaken with a definite object in view and in order to be effective must be carried out faithfully, persistently over a long period of time before results begin to appear. For this reason, the simpler the procedure and the less apparatus required the more useful it will prove to be. In the large rehabilitation centers of the army and industrial clinics of some of our large cities there are many kinds of elaborate and expensive apparatus which are used in efforts to cure disease or restore impaired function. However, in the usual run of orthopedic practice only the simpler measures as indicated above are used and the results are obtained by careful diagnosis, precision in prescribing treatment, and attention to details and persistence in applying the various natural remedies.

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PEPTIC ULCER

RELATION OF LOCATION AND TYPE TO CURE

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There is a vast amount of literature upon the subject of peptic ulcer, mostly upon the therapy of the disease. There is a wide difference of opinion as to how ulcers should be treated, one man believing in a rigid system, such as the "Sippy Regime," another in a more liberal system, with no attempt at alkalinization; others adopt a middle ground.

Why should there be such divergent views? Why should there not be uniformity of opinion about a subject that is well known?

There are probably two answers to these questions: (1) Many patients are treated for ulcer when no ulcer exists. (2) A proper differentiation has not been made between acute mucosal erosions and chronic indurated ulcer. There has not been enough emphasis laid upon the natural tendency for ulcers in certain locations to heal, and for ulcers in certain other locations to become chronic and resistant to treatment.

The etiological factors concerned in the production of acute mucosal erosions is one question, but the transformation of certain of the erosions into the chronic indurated type is distinctly another.

In the consideration of the therapy of ulcer these questions should be sharply differentiated

because there is no common basis for prognosis or length of treatment.

A review of the probable causes which produce acute ulcer or mucosal erosion indicates that many factors must be considered. One finds many theories advanced, none entirely proven, but many apparently having a basis in fact. For example one must consider as causes:

- (a) Mechanical (rough foods, foreign bodies, stomach lavage, etc.).
- (b) Thermal (too hot or too cold foods).
- (c) Vomiting.
- (d) Emboli (bland or bacterial).
- (e) Thrombosis.
- (f) Stasis (following cardiac disease with slowing or stagnation of blood with resulting autodigestion).
- (g) Vascular spasm, with resulting autodigestion.
- (h) Many other apparently probable or improbable causes.

If one accepts these causes as facts it is reasonable to suppose that ulcer of the stomach and duodenum would appear as frequently at one place as another, and this is probably true. If one wishes to accept, for example, that most ulcers are caused by bacterial emboli, one should find these erosions as commonly in the cardiac as in the pyloric end. There is no reason to think that bacteria would pick out certain areas to the exclusion of others. The circulation is probably the same at one point as another. The answer involves a consideration of the anatomy and physiology of the stomach.

The musculature of the stomach is composed of three layers, only one of which need concern us as it is the only important one. This is the circular coat, which begins somewhere in the region of the cardia and extends to the duodenum, gradually becoming thicker as the pylorus is reached, the pyloric sphincter being formed by an extra thickening of the muscle at this point. Therefore it is obvious that the pyloric end of the stomach is more concerned in contraction than the cardiac end.

The glands of the stomach, those secreting pepsin, rennin and hydrochloric acid, are arranged as follows: the pepsin and rennin glands, or so called parietal or chief cells, are found practically all over the stomach except around the cardia, being more abundant near the pylorus or in the antrum region.

The acid bearing cells, or border cells, are not found at all in the antrum or in the cardia; they are found only in the pars media or fundic portion.

One sees then, that the pars media and antrum are more subject to chemical irritants than the cardiac portion. A study of digestion in the stomach also shows that a certain rather limited area in the stomach is more subject to

chemical irritants and mechanical strain than others. This is the so called "stomach street," a narrow line on the lesser curvature extending from the pars media to the pylorus. Therefore this region is constantly bathed in a solution containing a high percentage of acid and pepsin.

Let us consider the points of predilection for chronic ulcer, not the acute erosions but the chronic type. They are practically all found along the lesser curvature, the most frequent site being the incisura angularis. Here begins the normally narrowed portion between the pars media and the antrum. They gradually decrease or occur in about the same frequency until the pylorus is reached, then increase again in the first portion of the duodenum, again on the lesser curvature.

At autopsy one finds a very large number of healed ulcers on the lesser curvature, high up, a little nearer the cardia than the pylorus. Approximately 20 per cent. of autopsy material shows healed ulcer of the stomach, nearly all high up on the lesser curvature. As one nears the pylorus more unhealed ulcers are found and in the duodenum it is rare to find a completely healed ulcer, and then only with diverticuli, distortions, stenoses, periduodenal adhesions, etc. Surgical material shows the same condition.

It is rational to assume then that ulcer occurring high up on the lesser curvature shows a natural tendency to heal, whereas, those occurring in the incisura angularis, the antrum and the pylorus, are much more resistant to cure, and in the case of chronic duodenal ulcer it is rare to find one completely healed.

One can assume then that the mechanical and chemical factors play an important part in the transformation of acute mucosal erosions into the chronic indurated forms. Probably retention of secretions, leading to more constant acidity, plays an important part.

The type of ulcers found in this region is most commonly round punched holes involving the mucosa, the submucosa, the muscularis and sometimes the serosa. Curious to state, many ulcers show a distinct tendency towards terrace formation on the pyloric side, the cardiac side being straight edged or undermined, giving an appearance on the fluoroscopic screen of a deep niche, pointing towards the cardia. The terracing is easily seen in the gross specimen and has been attributed by Aschoff to the rubbing of the food on the pyloric side. Other ulcers may show a distinct terracing all around, the hole in the mucosa being larger than in the muscularis, in other words there is a tendency toward funnel shaped depressions. Two ulcers may coalesce, forming a saddle bag shaped lesion. There is no absolute rule about the shape or size, some become as large as the palm of the hand.

Another interesting observation made by Schwartz and substantiated by Aschoff and Bauer, is the fact that individuals with the fish-hook type of stomach most often show ulcer along the lesser curvature, while those with the steer horn type of stomach most often show ulcer of the duodenum. Schwartz attributes this to the point of greatest pressure made by the waist band or belt. He does not mean that mucosal erosions appear oftener here than at other points, but that there appears to be some connection between the point of pressure and the transformation of acute lesions into the chronic type, the type that is resistant to treatment, that recurs at definite intervals for years.

So much has already been written upon the treatment of peptic ulcer that it is not necessary to go into details, reference to standard textbooks being quite sufficient to give a clear perspective of the various plans.

The fundamental principle involved, a proper differentiation of type, whether one is dealing with an acute or chronic indurated ulcer, should be properly understood and considered. Using the facts already obtained from clinical experience, from autopsy and surgical material, it becomes quite evident that no hard and fast regime is suitable for all cases.

For example, ambulatory treatment is in most instances successful in simple erosion or acute ulcer. There is no clinical or pathological evidence presented which proves that bed rest is essential. There is much evidence to support the view that these cases recover with ambulatory treatment quite promptly. To hamper this type of patient with hospitalization, to impose a long, tedious, irksome regime for months after symptoms have disappeared, appears from the evidence to be unnecessary.

One must not become confused by the good results obtained from these long, tedious treatments. Unquestionably the patients are cured, but they are also cured just as quickly and as permanently with more simple measures.

There is danger of making dietary faddists or neurasthenics out of these patients by imposing infantile diets over years.

Ulcer diets should contain, as a first consideration, such foods as will be nonirritating and contain a minimum of residue: milk, cream, eggs, cereals, toast, etc. They should contain no foods which have a tendency toward increased acid secretion, such as heavy meats, condiments, fruits, pastries, etc. Carbohydrate foods leave the stomach quicker than proteins or fats and are probably preferable at the beginning.

The acidity and hypersecretion can be partially controlled by frequent small feedings. Gastric lavage is necessary in some cases.

Alkalies can be advantageously given as many times a day as is necessary to relieve high

acidity. Such drugs as sodium bicarbonate, magnesium oxide, and calcium carbonate are usually employed. Sippy's powders appear to be rational at the outset, but should be reduced or discontinued after the symptoms disappear.

Constipation is often an annoying symptom in ulcer on account of the nonresidue diet and the spasm of the lower bowel as a result of parasympathetic stimulation. Increasing doses of magnesium oxide may correct this; if not, two ounces of cotton seed or olive oil injected into the rectum at night usually suffices. Calcium carbonate is very constipating and care should be taken not to give too large doses.

For many years it has been observed that patients experience several days relief after a barium meal for diagnostic purposes. It would seem rational to apply this in the treatment and in fact it has been done quite successfully.

The therapy of chronic indurated ulcer will vary somewhat. It may be necessary when the symptoms are severe or where there is organic obstruction or retained secretion due to spasm, to put the patient to bed until these symptoms are controlled. The diet and medication are essentially the same but of course must be prolonged for many months or even years.

After the acute symptoms have subsided, it will usually be found that many of the less irritating vegetables, such as puree of potatoes, peas, spinach, etc., can be given. Well cooked poultry, fish, or beef need not be withheld indefinitely. Dietary increases both in quantity and variety, should be begun very cautiously, adding one article at a time and waiting several days before repeating.

Careful and frequent observation is essential to the success of the treatment. Very few patients have the necessary knowledge of pathology or dietetics to continue treatment without frequent advice. Another important factor in frequent consultation is that it offers the physician an opportunity to reestablish the confidence of the patient in himself, in his ability to eat certain foods without danger of relapse. Nervous symptoms will not become so prominent in such cases. Small insignificant symptoms due to constipation, overwork, lack of exercise, etc., can be corrected and not be a constant source of worry and apprehension.

With medical treatment many patients obtain complete cessation of symptoms for long periods, some become entirely cured. Practically all acute erosions or acute ulcers will get well, especially if the symptoms have existed less than a year or, at the most, two years. This clinical fact is proper justification for medical treatment in nearly every case.

It is poor judgment to prolong the treatment indefinitely if the patient does not improve, or

if the treatment has been properly applied several times without permanent relief. These patients belong to the surgeon and the sooner surgery is done the better for all concerned. Cancer frequently develops upon the edge of the ulcer in very chronic cases and one must never forget this very serious complication. That much dreaded disaster, perforation, is always possible. Medical cure should not be promised where cure is improbable. The patient should be told of the chronicity of the lesion and be permitted to use his own judgment whether operation is to be performed.

Unfortunately surgery is not always a cure, that is, surgery short of complete resection of the ulcer. Surgery should always be followed by the same careful medical care that is given nonsurgical cases. To neglect this is to invite disaster, either failure of the ulcer to heal, or the development of a new ulcer at the point of anastomosis of the stomach with the jejunum.

It may be necessary at times to make a partial resection of the stomach to complete a cure. This should be done only after other less radical measures have failed, because experience has shown that from 15 to 20 per cent. of patients, with a loss of the acid-bearing area, subsequently develop a gastrogenic diarrhea similar to the diarrhea seen in achilia gastrica. This is a very distressing sequel and many times uncontrollable.

To the physician who acquires a rational knowledge of pathology of ulcer and the physiology of the stomach, and who is willing to devote many hours to each patient during the process of the disease, there is no more satisfying field in the practice of medicine. The results are in direct proportion to the effort; a haphazard handling often fails. Ulcer patients are very grateful to the physician who cures them and fortunately most patients present themselves to some physician early enough to be cured by medical handling.

934 Argyle Bldg.

CHOLECYSTOGRAPHY*

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Before the development of cholecystography, roentgen examination of the gallbladder consisted in the demonstration of stones, a thickened gallbladder and a few indirect gastric signs of cholecystic disease. When these signs are clearly elicited any one or all of them

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are of the greatest value in arriving at a correct conclusion in regard to the existence of disease in the biliary tract. Unfortunately these findings, at best difficult to elicit, allow of uncertain interpretation and difference of opinion in interpretation, and the most serious drawback of all is that they are not inevitable signs of disease of the gallbladder. They may be, and frequently are, entirely lacking in extreme cholecystic disease, even of chronic nature. Their existence is probably always a sequence to long-standing or repeated attacks of gallbladder disease and never of its acute phases.

With the known high incidence of disease of the gallbladder, we are glad to promote a more accurate method of studying the biliary tract. Cholecystography seems to bridge the gap left by the older methods of roentgen examination and supplies a much more precise knowledge of the diseased gallbladder.

Although cholecystography promises so much, there are no indications that it will supplant the present methods of examination in this field. Instead of simplifying procedures it has complicated them by introducing another step that has to be used if the best type of work is to be done. This added complexity is, however, offset by the value of the findings obtained.

We do not believe that the patient with symptoms of gallbladder disease should have the investigation of the gastro-intestinal tract omitted. The best results will be obtained by a direct roentgen examination of the gallbladder, a gastro-intestinal examination and cholecystography.

In order that the gallbladder may be visualized it is necessary, (as has been shown by Graham, Cole and Copher) that: 1. The liver excrete the dye. 2. The hepatic, cystic and common ducts be patent. 3. The gallbladder have the ability of emptying and filling itself. 4. The gallbladder, once filled, be of sufficient size and contain enough dye to cast a shadow. 5. The gallbladder be able to concentrate the dye.

The first condition, because of the overload capacity of the liver, will probably always be met, except in extreme hepatic disease, where there should be no occasion to employ this method. We have examined several cases with varying degrees of hepatitis. It is obvious that occlusion of the hepatic and cystic ducts prevent the dye from entering the gallbladder. It is rather difficult to understand how an occlusion of the common duct prevents concentration of the dye in the gallbladder unless it can be explained on the basis that the overfilled gallbladder has lost its power to take out fluid from the bile, with a resulting lack of concen-

tration of enough dye to cast a shadow. We have one case in our series that seems to show a concentration of the dye in the liver. In another case, which clinically is a common duct stone, we were able to demonstrate a very faint shadow of a much enlarged gallbladder. If disease has produced a marked contraction of the gallbladder not enough dye can be contained to cast a shadow. The gallbladder must be able to concentrate the bile to intensify the shadow.

In this series we have found that the visualized gallbladder has a wide variation in position, size, shape and relation to other organs. Some cases indicate that the same

relation to the gallbladder that Mills demonstrated regarding the relationship of bodily habitus to the alimentary tract. Bearing this fact in mind it seems to us that we will find that each type of habitus will have a characteristic gallbladder; that the asthenic will have a long narrow gallbladder with a slow emptying rate compared to the sthenic type, which should have the characteristic oval high gallbladder with a more rapid emptying.

In our first series of 60 cases where we used the oral administration of sodium tetraiodophenolphthalein the results have been gratifying. We have had but two who gave any reaction. One of these gave a history of periodic attacks of nausea and vomiting. During the 24 hours following the administration of the salt this patient had a severe attack of nausea and vomiting and complained of a headache. An additional factor in this case is that the patient had a lumbar puncture just preceding the administration of the salt. The second case was undoubtedly due to over-anxiety on our part, which brings out the fact that one must have a very definite technique in the management of the patient which must be strictly adhered to if results are to be expected and the roentgenogram is of diagnostic value. We have taken a routine series of negatives at the 12th and 15th hour intervals, then given the patient 12 ounces of top milk and cream equal parts and made immediately a third series of negatives to determine the contractility and emptying of the gallbladder.

Except in the two cases mentioned where we have followed a definite method in the management of the patient, we have had no untoward reactions. There has been no significant change in pulse, respiration or blood pressure following the administration of the salt. We have given it to patients with myocardial disease without reaction. Electrocardiograms taken before and after its administration have shown no change in any of its leads. In no case has the urine shown albumin, sugar, red blood cells or casts following its administration. There seems to

be no absolute contra-indication for the use of sodium tetraiodophenolphthalein given by oral administration, unless it be in the patient whose condition is so low as to make any similar procedure dangerous. Intense jaundice should be a contra-indication for the reason that it has been definitely demonstrated in experimental animals undergoing hepatic degeneration from chloroform or with common bile duct obstruction, that only ill defined gallbladder shadows are obtained and consequently the test would not be worth while. Administration of the dye under these conditions, however, would not be attended with any great degree of danger as it has been found in dogs and cats that the toxicity was increased only about 25 per cent. after ligation of the common bile duct. Interpreting the shadows: A normal gallbladder casting a shadow at the 12th hour, reaching its maximum at the 15th hour, and is smooth and regular in outline, size, shape, position and relations to other organs, varies according to the habitus of the individual. After food there is a quick reduction in the size of the shadow and we feel that this contraction and emptying is very diagnostic of a normal condition.

Failure to obtain such a shadow with proper management of the patient and good radiographic technique, we feel, is indicative of disease of the biliary tract. While our proven cases in this series are very few, so far this interpretation has proven correct. Our proven cases have presented no shadow or they have shown lack of intensity with constancy of size.

The different degrees of density should be approached with a great deal of care, especially those bordering on the normal. In the lighter densities one may feel fairly safe in drawing a conclusion; in the more dense it is less safe.

Failure to obtain this shadow may be due to hepatic, cystic or common duct occlusion, changes in the walls of the gallbladder or disturbed function of the liver. We have had several cases with jaundice of varying degrees with a normal gallbladder visualization.

Gallstones free in the gallbladder without occlusions to any of the ducts are shown as negative shadows in the cholecystogram. In two cases where the roentgen evidence demonstrated gallstones in the plain negatives we tried to visualize the gallbladder. In one we obtained a very faint shadow and in the other we could see no evidence of the dye.

To date (April 12, 1926), we have given the gallbladder dye stuff in 350 cases. Thirty-seven of these cases have been operated with confirmation of our interpretations in each case.

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PSYCHOANALYSIS

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This paper has but one purpose, that of directing attention to the fact that the reaction of the patient to certain mental states (such as phobias, delusions, shock, disagreeable situations or any other bugbear) is the cause of many chronic troubles which may be relieved by psychoanalysis. In current medical literature outside of journals on psychiatry, nervous and mental diseases, the A.M.A. and national and international clinical journals, we find the subject treated in only two articles in two state medical journals¹ and kindred topics in four articles in three other journals.²

Aside from the few paragraphs on hysteria and neuasthenia in our textbooks and a few cases of each that the student may see, he perhaps has a few instances from his instructors, of patients going the rounds of physicians and hospitals with some chronic trouble which is pointed out as being mental, "all in the mind" and nothing whatever done to relieve the condition. The more times and the greater number of doctors consulted, the more chronic the trouble and the greater the invalidism.

While one of us was a student there was an operation performed before the class for the psychological effect, the professor explaining to the husband and the class that it was all in her mind but she might be relieved thereby simply because she thought she needed the operation. It is evident to us now that the woman needed an analysis and that in all probability the cause of her mental condition could have been determined and removed.

We know that mental states, emotions, enforced disagreeable situations, to which a patient is unable to adjust himself (and less able to get away from) find outlet in physical reactions—symptoms of disease and disorders of function.

Every physician's practice is replete with patients upon whom the true and tried tonics, stomachics, stimulants, diuretics, etc., fail to bring the patient to a satisfactory well-being and, if one doctor tires out on the case, the patient seeks another and another, finally falling into the hands of the chiropractor, osteopath or Christian Scientist. Often patients present themselves with the rather proud statement that five or six physicians have treated them for a dozen different ailments, with no result. No doubt the physicians all recognized that the trouble was not organic and the patient had no

pathological condition, but because it was "all in the mind" he allowed this shifting and drifting.

What can the wife of a man do, even if it is a mental condition that causes her husband's attacks of tachycardia to the extent of his being incapacitated? To whom shall she go if not to the physician? Is it not our duty as physicians to acquaint ourselves with the environment and the mental state of the patient so as to ferret out the particular stress, strain, shock, delusion, phobia, or whatever hideous or unbearable thing it is from which he cannot bodily escape? He does escape through his ailment which is his alibi. Perhaps nine-tenths of the failures in medicine come under the head of nervous cases, have no pathological condition and need psychoanalysis for relief.

These patients are not defectives nor morons, but very useful, efficient and sometimes prominent persons, who have failed to make adjustments. Maybe they have been under continual and distressing oppression of some kind. Perhaps lacking in stamina, or born with a temperament incompatible with some member of the household or their environment.

As doctors we are too literal. We are always looking for a pathological basis for pain and disorders of function. We would do well to take a hint from the neighbors and friends at times, as the laity are quite as apt in diagnosing mental trouble as they are to sense impending death. And we know too well that the mind can oppress to the point of all kinds of pain and failure of organs to function properly. For instance: One faints at the sight of blood or upon hearing bad news. Grief over the sudden death of a loved one may destroy the appetite, cause headache and vomiting. The scene of a near accident may so terrorize a person that he is unable to move. It takes the sturdiest constitution and stout heart to undergo continual grief and trouble without its telling on one's physical well being. These go to show that mental stress and strain do have a deleterious effect upon the physical make up and cannot be laid to the door of the imagination.

In order to show the results of our efforts along the line of psychoanalysis we will briefly report a few cases, some of which caused us a great deal of anxiety and cost time and effort out of all proportion to the compensation.

REPORT OF CASES

Case 1. Miss N. 35 years old. Had been growing deaf for several years. Assisted her mother in conducting a boarding house. In March, 1915, came for an examination on account of pelvic pain, metrorrhagia and severe headaches. There was some tenderness of right ovary and appendix. A uterine tonic was prescribed and the vibrator used for the headache. The symptoms did not abate and the

general condition grew to be one of nervousness, insomnia, and general weakness, to near exhaustion, until a complete collapse occurred on the street late in the following June and the patient was brought to the hospital. As the uterine hemorrhages were the most prominent symptom, we decided to do a curettage. Shortly after the patient was put to bed after the operation, the respirations became slower and slower, falling to four per minute. Consciousness returned, all kinds of stimulants were given, but to no avail. It seemed the patient had to be reminded to breathe. For hours at a time, over a period of several days, the nurse was in constant attendance, resorting often to slaps with cold water cloths, as is done in morphine narcosis. During the next nine weeks much was learned about the patient herself. She had been reading Christian Science and had been to healers to have her hearing restored. She was of Spanish decent, artistic, energetic, a social leader, and was embarrassed and timid on account of the deafness; also very religious and conscientiously believed in Christian Science and tried to live up to it. But why this patient was still exhausted after nine weeks in the hospital, came with lightning-like rapidity and clearness, one day when this conversation was heard between her and a Christian Science friend:

The friend: "You know, dear, that when you have faith enough you will be healed. The Lord is willing and ready; the fault is yours." The reply with the utmost abandon, "Yes, I realize it is all my fault."

The patient had been pulled by two opposing forces, her mother and one set of friends persuading her to consult physicians and her Christian Science friends urging her to faith in the healers. The result was that she came to us bodily but not mentally. Her self-accusation and condemnation were so great (because the Lord had not restored her hearing) that it reduced her to exhaustion.

What was done? To be brief, Mrs. Eddy's book was read to her and scriptural passages to show the fallacy. When three contradictory statements on the first page of "Science and Health" were pointed out, and many other fallacies, she became reconciled to bear her burden of deafness and orthodox faith in the scriptures was restored. Thus so soon as she gave up the delusion she was under she recovered as if by magic.

Case 2. Mrs. B. 45 years of age, farmer's wife, one child 18. Was referred to us by her family physician for an operation on account of pelvic trouble. Had been under treatment several months. The patient was extremely nervous over the fact, apparently, that she must undergo a surgical operation. She seemed fearful of cancer and the results of the operation yet anxious for it. The examination was negative. Whatever trouble had existed, if any, had been corrected by the local treatments. The patient grew more nervous, excited and even disappointed when told the operation was unnecessary. As one of us had known this woman as a school teacher before her marriage and also knew her rather slow, plodding husband and her lonely farm-life, after consultation it was easy to decide what course to pursue. The patient was ambitious, industrious, with social inclinations. Hers was all work and no play, not enough change and entertainment; her son, for whom the farm-life had been endured, was away at school. Her natural legitimate longings were unsatisfied. When this situation caused some pelvic complaints and her physician gave treatments without helping the general condition, she became a nervous wreck. We recommended to the husband that he bring his wife to town for week-ends, ex-

plaining that she needed a change, and told her the true state of affairs. She was advised to attend the band concerts, picture shows, and take part in church affairs—and was assured that there was nothing physically the matter. Meantime we began unwinding the mental operation to find the straw that broke the camel's back. It proved to be the unbearable grind of the cream-separator! They were advised to handle the milk in another way for a time. Thus, her mental and physical poise was restored and we lost a perfectly good surgical fee.

Doubtless many such cases are said by physicians to be "all in the mind," the family instructed thus, the patient considered culpable of some crime, and no relief given. The patient continues to be the victim of medicine, surgeons and hospitals. Of course these cases take much time, patience and sympathy, and withal a firmness that comes with absolute conviction that the trouble is psychic and nervous. This conviction can come only by psychoanalysis.

Case 3. Mrs. K. age 40 years came to Eldorado Springs in 1921 from Kansas on account of metrorrhagia. Second marriage seven years previously. Had two children by first marriage; always had been well and strong till about five years before when the uterine hemorrhages began. She had been to six or eight physicians who had diagnosed the trouble as ulcer, metritis, and cancer. The patient was not very much excited or nervous over her condition but hopeful and eager to be well. There was no evidence of phobia, neurosis or psychosis. The pelvic examination was negative. After the use of various drugs a curettage was done and the patient went home apparently well. In a few weeks she returned as bad as ever; she always improved while away, but relapsed upon going home. It was a good time to change doctors, which would have given us great relief, but somehow she hung on. And we hung on until we concluded that the cause was not pathological but functional. Thus began our study of the patient as an individual and we began instructing her along the line of effects from nervous and mental causes. We questioned her as to her family, past and present, and implored her to tell us everything from infancy up. When she understood the proposition she was eager to cooperate.

At last, behold! It was found out that she never could bear to hear violin music. Her daughter played the piano and her husband the violin. In all her life she had never mentioned the incompatibility, but had fled from the violin. She was ashamed of it and, determined to do her duty by her family, she made herself endure the music and had hemorrhages. She had no idea that the endurance caused her illness. But when she was ill she spent much time at the springs, away from home.

The violin was eliminated and the patient has remained well these five years.

Case 4. A man 53 years old had always been strong and well, but spare built; he was a successful farmer. His grandmother was said to have been erratic. One aunt was said to have hysterical attacks. A cousin had two imbecile children (the parents were cousins). One brother was nervous for several years after having been injured in the Ardmore gasoline explosion.

About six years ago the patient had an acute abdominal attack diagnosed by one physician as obstruction of the bowel and by another as appendicitis. Soon after this illness he left the farm, bought an interest in a hardware store and moved to town. In January, 1923, the whole family of five had the influenza. It was a very scary time; the neighbors were afraid to come in; the patient was

the last one to take the "flu" and thus stayed up as long as possible, taking care of the other members of the family. He was sick three weeks and did not seem to recuperate afterward; was nervous, had fleeting abdominal pains, felt weak and exhausted, was unable to return to the store. On account of his condition his partner urged him to sell his interest in the store. When the partner called at the house to talk trade, he found the patient too nervous to talk business. The patient sold out to his partner, the deal being made through his wife. In July, 1923, six months after the "flu," he had his appendix removed. On the sixth day after his operation, while eating his first full meal (of which he was fearful) he developed a severe tachycardia, giving much fright to nurses, physicians and to himself. These attacks have continued for two years during which time the patient has been practically an invalid. The man is underweight, anemic, very nervous, with an anxious, drawn expression. The tachycardia seems to be brought on by slight distention of the stomach. Hence he is afraid to eat. He delights to dwell on his condition, telling how many physicians have failed to relieve him. He often says he cannot stand many such spells and the members of the family must be ready with various kinds of drugs when the attack comes on. There is a polyuria associated with the tachycardia which never comes in the night or the forenoon.

As yet the mental cause has not been fully determined but probably the starter was the anxiety during the "flu," followed by the shock of the operation and the fear of not getting well. After being assured there was no organic trouble but that the condition was purely nervous and could be relieved, he is improving in every way, under Bland's pills and hormotone. He says he will soon be well and is looking for an occupation. He has gained 20 pounds; has had no tachycardia for six months.

The mental bugbear in these cases may be one of a thousand things. Perhaps a girl's virtue has been assailed by one in whom she had the utmost confidence. This gives her such a shock and fear of being thought guilty of some impropriety that she cannot bring herself to apprise her best friend of the incident. So long as she keeps the thing pent up in her mind the condition grows worse and is likely to cause illness, the dope habit or suicide. It is the secret shock, trouble, sin, fear, grief, feeling of guilt, anxiety, perplexity, resentment, that is crucifying.

Maybe a high strung, nervous, delicate child with a thin skin, artistic temperament and sensitive nervous system is compelled to wear flannel that irritates and scratches to the point of frenzy. Throughout her childhood this irritation is kept up until her nervous system is wrecked, she is offended and feels that she has been unduly oppressed. In adult life she is heir to innumerable physical manifestations that are not relieved by medicine or surgery.

Our patients should be treated as personalities and individualities. There is as much difference in the reactions of different persons to the same stimuli as there is in pieces of wood to worms and nails. In case of a nagging wife one man may find outlet for his feelings by

swearing at the stock, another by drink and the third may take a sick headache. The wife of one drunkard may find relief in tears, another by invoking the sympathy of the neighbors and still another may become hysterical. There are some few people yet, so constituted that no amount of hardship, trouble, grief, suppressed mental emotions, secret sins, grievances or what not, would ever react to physical illness. Such are few and fortunate and are not the class of persons who frequent the doctor's office. If they do come complaining, we may expect to find pathological conditions far beyond their complaints.

On the other hand, there is a class of persons who have been pampered and indulged in childhood, brought up with no discipline, with every wish satisfied, who lack sturdiness and stamina and thus show little or no resistance to mental impressions.

We sometimes hear the expression, "He has undergone enough trouble to drive him crazy." In eight hundred acute cases of insanity in the Missouri State Hospital at St. Joseph, observed in a period of two years, only one was caused by grief and worry. One hundred times more frequently we find chronic illness caused by mental states, which is sufficient reason for psychoanalysis. In every case where the true condition is found by the physician and explained to the patient the removal of "the straw that broke the camel's back," with proper assurance and encouragement, will cause the illness to vanish.

CONCLUSIONS:

1. It is evident that an increasing number of chronic cases of illness have no pathological basis, but are the result of nervous force misapplied through the influence of the mind.
2. Much of this chronic illness is exaggerated and made worse by mistaken diagnosis and treatment.
3. Psychoanalysis is required in this type of chronicity to unravel the mind and remove from it the secret bugbear.
4. There is a growing need for this specialty in medicine.

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BLINDNESS AMONG 6,000 ADULTS

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The granting of a pension for the blind in Missouri has afforded the opportunity for obtaining statistics on large numbers of adult blind. Such statistics are valuable, for there exist in this country no worthwhile figures on large numbers of blind. The United States census of the blind is worthless. The only valuable statistics are those of Magnus, a prominent German ophthalmologist who published in 1883 the causes of blindness in 2,528 cases of bilateral blindness.

From June, 1921, to June, 1923, a pension of \$25 a month was granted to every resident of Missouri, 21 or more years of age with an income of not more than \$780 a year whose vision in each eye was not better than 20/450 with or without correcting lenses.

In 1922¹ there was published the cause of blindness, vision, age and sex in 3,910 individuals; this was the number of applicants asking for the pension up to about February 1, 1922. In the present report, similar tables are given on the entire number (5,927) applying up to June, 1923.

In Tables No. 1 and No. 2, the number of cases are noted in terms of eyes, because in many individuals the cause of blindness in one eye is different from that in the other eye. The percentage in Table No. 1 for each cause of blindness is figured on the number under each cause as examined by eye specialists. Practically all the cases of injury were examined by specialists.

TABLE NO. 1. CAUSES OF BLINDNESS

Causes	Eyes examined by oculist Number	Eyes examined by general physician Number	Cause of blindness Per Cent.
Trachoma	1,937	497	20.3
Cataract	1,720	713	18.0
Optic atrophy	1,252	120	13.0
Corneal ulceration	1,016	272	10.6
Glaucoma	904	149	9.5
Uveitis	524	48	5.5
Simple trauma	485		5.1
Trauma with sympathetic ophthalmia	152		1.6
Chorioretinitis and chorioiditis	278	8	2.9
Ophthalmia neonatorum ...	183	13	2.0
Pigmentary degeneration of retina	154	22	1.6
Progressive myopia	119	5	1.2
Optic neuritis and neuroretinitis	104	48	1.1
Congenital malformations..	74		0.8
Congenital cataract	50	8	0.5
Acid, lime and lye burns..	44		0.5
Retinal detachment	36	1	0.4
Pterygium	27	11	0.3
Postocular amblyopia	20		0.2
Parenchymatous keratitis..	18		0.2
Keratoconus	18	4	0.2
Essential shrinking of con-			

1. Journal of American Medical Association, 79:1305, 1922.

Causes	Eyes examined by oculist	Eyes examined by general physician	Cause of blindness
	Number	Number	Per Cent.
Conjunctiva	10		0.1
Amblyopia ex anopsia.....	10		0.1
Hemorrhagic retinitis	9		0.1
Albino	8	2	0.1
Albuminuric retinitis	8	4	0.1
Cancer	8		0.1
Choked disc	6		
Wood alcohol	4	2	
Miscellaneous causes	13		0.1
Fundus condition (obscured by lens changes).....	123	17	1.3
No diagnosis	242	348	2.5
Total eyes	9,560	2,294	100.0
Total cases	4,780	1,147	
Per cent.	80.7	19.3	
Altogether	5,927 cases or 100.0%		

The realization of how important a factor in causing blindness was trachoma, as revealed in the 1922 statistics, caused the State Board of Health in 1922 under the leadership of Dr. E. P. North, to make a special effort to combat it. The aid of the United States Public Health Service was obtained and a trachoma hospital established at Rolla, Mo. Traveling trachoma clinics were also sent out over the southern counties of the state.

The diagnosis of cataract is so often made where cataract has secondarily occurred in an eye previously blinded from another cause that the high percentage of cataract in Table No. 1 is of no great significance.

Optic atrophy is much the most frequent single cause of blindness in St. Louis and Kansas City, producing 22.8 per cent. of the blindness in these two metropolises. Syphilis is answerable for most (perhaps 75 per cent.) of optic atrophy, so the fight on venereal disease cannot be too much agitated.

TABLE NO. 2. CAUSES OF TRAUMA

Destructive agent	Eyes injured by simple trauma	Eyes injured by trauma and sympathetic ophthalmia	Per Cent.
	Number	Number	
Dynamite and gunpowder explosion	154		24.2
Gunshot	93	4	15.2
Wood (kindling and chips)	31	2	5.2
Knife	6	26	5.1
Tree (twigs and branches)	21	10	4.8
Stick	20	10	4.6
Nail	8	18	4.0
Steel (flying particle).....	15	6	3.4
Rock	11	6	2.7
Dynamite cap and gun cap Explosions (other than above)	15		2.4
Fall	13		2.0
Corn stalk	11	2	2.0
Blows	5	8	2.0
Missiles	6	6	2.0
Scissors	6	4	1.6
Toy cannon	3	4	1.1
Kick	5		0.8
Glass	3	2	0.8
Wire	4		0.6
Miscellaneous objects	4		0.6
Unknown	21	26	7.4
Totals	30	18	7.5
Totals	485	152	100.0
Per Cent.	76.1%	23.9%	

TABLE NO. 3. VISION

Vision	Number of cases	Percentage of cases
O and light perception	3,060	51.6
Light perception to 10/450.....	1,652	27.9
10/450 to 20/450.....	1,018	17.2
Not given accurately	197	3.3
Totals	5,927	100.

TABLE NO. 4. AGE

Age	Number of cases	Percentage of cases
From 20 to 30 years.....	257	4.3
30 to 40 years	474	8.0
40 to 50 years	683	11.5
50 to 60 years	901	15.2
60 to 70 years	1,403	23.7
70 to 80 years	1,370	23.2
80 to 90 years.....	700	11.8
90 to 100 years	125	2.1
100 and over	14	0.2
Totals	5,927	100.0
76.2% of the total number are 50 years old and over.		

TABLE NO. 5. SEX

Sex	Number of cases	Percentage of cases
Male	3,197	54.0
Female	2,730	46.0
Totals	5,927	100.0

The amount of blindness in a county varied from 1 among 213 inhabitants to 1 among 1831 residents; the ratio in St. Louis City was 1 to 1211 and in Kansas City 1 to 1262; the average for the state was 1 to 574.

CONCLUSIONS

No claim for accuracy can be made for the foregoing figures but as indicators they are valuable. At least they are much the best statistics extant for this state and better than those for any other state which must depend upon the altogether inaccurate United States Census for the blind. There can be no effective prevention of blindness until there are accurate statistics of the causes of blindness.

826 Metropolitan Bldg.

Unilateral facial hyperhidrosis not infrequently follows injury or disease of the parotid gland. In the case described by Warren T. Vaughan, Richmond, Va., (*Journal A. M. A.*, Feb. 21, 1925), symptoms developed after recovery from parotid abscess; and, as far as the ephidrosis is concerned, it shows no remarkable points of difference from the three cases reported recently by New and Bozer. An additional observation, which indeed, was the patient's chief complaint, has not been mentioned so far, in the literature on this subject. The patient complained of unusual tenderness of all the teeth on the affected side, objectively accounted for by extensive unilateral erosion of the articular surfaces with destruction of fully half the exposed portion of the molar teeth. This appears to have been due to complete absence of parotid secretion on the affected side with resulting failure of neutralization of the acid secretion from the glands situated in the gums.

THE JOURNAL

OF THE

Missouri State Medical Association

MAY, 1926

EDITORIALS

DR. JABEZ JACKSON ELECTED PRESIDENT-ELECT OF AMERICAN MEDICAL ASSOCIATION

At the Dallas meeting of the American Medical Association, which adjourned April 23, Dr. Jabez N. Jackson, of Kansas City, was elected president-elect of the national organization. This is a great honor not only for Doctor Jackson but for every member of the Missouri State Medical Association and in fact of the medical profession of the Great Southwest. Dr. Jackson was the unanimous choice of the House of Delegates, no other candidate being offered and the ballot cast by a rising vote.

Not since 1887 has a physician in this territory occupied the high office of president of the American Medical Association. Previous presidents from Missouri were Dr. Chas. A. Pope, 1854; Dr. John T. Hodgen, 1881, and Dr. E. H. Gregory, 1887.

The Dallas meeting was a very successful session. Over 4100 Fellows registered and the scientific work was of a high standard, while the House of Delegates conducted the business affairs of the organization in a wise and progressive manner. All the Missouri delegates were present except one and they attended the sessions continuously. Dr. Emmett P. North was appointed alternate for Dr. Lyter and was a member of the Reference Committee on Miscellaneous Business, and Dr. E. J. Goodwin was appointed a member of the Reference Committee on Reports of the Board of Trustees and the Secretary. Dr. Rock Sleyster, of Wisconsin, the vice speaker, was elected trustee to fill the unexpired term of Dr. Thos. M. McDavitt, and Dr. A. H. Bunce, of Georgia, was elected vice speaker. Dr. Upham, of Ohio, Dr. Richardson, of Washington, D. C., and Dr. Pettit, of Oregon, were elected trustees to succeed themselves. Dr. F. C. Warnshuis, of Michigan, was unanimously re-elected Speaker of the House. Dr. J. O. Reynolds, of Dallas, was elected vice president. There was a spirited contest for the next place of meeting between Washington, D. C., Cleveland and St. Paul, Washington being chosen by a large majority.

The Dallas physicians entertained the association in a very splendid fashion. The large

number of visitors crowded the facilities for house accommodations to a somewhat noticeable extent, but the local members were able to meet all emergencies and everyone seemed to be well taken care of. The entertainments were elaborate and numerous, the only marring feature being the severe rain storm on the day when an elaborate barbecue had been prepared for the visitors.

ST. LOUIS IS PREPARING TO ENTERTAIN YOU—MAY 18, 19, 20

Arrangements for the 69th Annual Meeting of our Association have been completed and the members from St. Louis are awaiting the arrival of their friends and fellow physicians to gather in the medical center of the state. The program committee has arranged a very attractive series of papers to be read and clinics to be held, an innovation in the arrangement being diagnostic clinics at the meeting place, two of these being scheduled for Wednesday morning. The clinics at the hospitals will be conducted on Tuesday morning and Thursday morning. The clinics at the hospitals are most extensive and include not only general surgery and medicine but numerous clinics in the specialties.

On Tuesday morning clinics will be held at the Washington University and on Thursday morning at the St. Louis University and various hospitals. Accommodations will be ample at the general clinics, but in some of the special clinics the accommodations are limited and, therefore, admission will be by card. On another page in this issue you will find the clinics scheduled and if you wish to attend the special clinics that are marked with a star, you are earnestly requested to send a post card notice to the Secretary in advance of the meeting so that we may have an idea of the approximate number who will want to attend the special clinics. Admission cards can be obtained at the registration desk when you register.

The program committee invited the St. Louis Clinics, which was recently reorganized, to assume the responsibility for the organization and conduct of the clinics. This the St. Louis Clinic has done in a most admirable manner.

Dr. John A. Witherspoon, of Nashville, Tennessee, Clinical Professor of Medicine at Vanderbilt University School of Medicine and a former President of the American Medical Association, will be the guest of our Association and deliver an address on Wednesday evening. He will also conduct a diagnostic clinic on duodenal and gastric ulcer.

Dr. F. Park Lewis, of Buffalo, New York, is another guest who will address our meeting on Wednesday evening. Dr. Lewis is the guest of the Ophthalmic Section of the St. Louis Medi-

cal Society and comes to St. Louis to accept the Leslie Dana Medal on behalf of Miss Louisa Lee Schuyler, of New York, for distinguished services in the development of movements for the conservation of vision. Miss Schuyler is 88 years of age and therefore cannot make the trip to receive the medal.

THE HOUSE OF DELEGATES

The House of Delegates will hold its first session on Monday, May 17, one day in advance of the regular scientific proceedings. This arrangement affords the House ample time to deliberate upon the questions that come before it and prepare for its final session on Wednesday, May 19. The Council will hold its session on Monday, May 17, immediately after the noon recess of the House of Delegates. The complete program will be found on another page of this issue.

REDUCED RAILROAD FARE FOR STATE ASSOCIATION MEETING

A rate of one and one half fare for the round trip to St. Louis has been granted by the railroads to those who attend the meeting on May 17-20. This rate will also be available for the families of members attending the meeting, including members of the Women's Auxiliary.

In order to obtain the rate of one half fare on the return trip, you must ask the ticket agent to give you a CERTIFICATE at the time you purchase your ticket to St. Louis. Deposit this certificate at the registration desk to be countersigned by the Secretary of the Association and validated by the railroad representative. When purchasing your return ticket this certificate will entitle you to a rate of one half the regular fare.

GOLFERS, TAKE NOTICE

Will all members of the State Medical Association, who are interested in golf and who contemplate attending the Golf Tournament and Banquet at St. Louis on the afternoon and evening of May 17, at the North Hills Club, send in their names at once so that complete information may be forwarded to them by the Entertainment Committee? We are forced to use Monday afternoon on account of the difficulty in obtaining the use of the links, and you are earnestly requested to make your plans to reach the city Monday morning in order that the tournament may start promptly at noon. There will be a large attendance and we urge you to reply at once directly to the undersigned from whom you will receive full information and instructions.

FRED BAILEY, Chairman,
Entertainment Committee,
Metropolitan Bldg., St. Louis.

HOTELS AND RATES FOR ST. LOUIS MEETING, MAY 18, 19, 20

All the hotels listed below are members of the Convention Bureau of St. Louis and the rates published here are the usual rates, with some reductions where there are several persons in a room. In making your reservations, please indicate the kind of room you want and how many people will occupy it with you; also inform the hotel on what day you expect to arrive, and make your reservations direct with the hotel. The Melbourne Hotel will be the headquarters.

Name and Address	HOTEL RATES	
	Without Bath	With Bath
American, 7th and Market	Sgle. Dbble.	\$2.50 to 4.00 to
American Annex, 6th and Market	Sgle. Dbble.	2.50 to 4.00 to
Buckingham, Kingshighway & W. Pine Blvd.	Sgle. \$2.00 Suite with 4 persons	4.00 to 5.00 2.00 each
Chase, Kingshighway and Lindell	Sgle. Dbble.	4.00 to 6.00 to
Claridge, 18th and Locust	Sgle. Dbble.	2.50 to 4.00 to
Coronado, Spring & Lindell	Sgle. Dbble.	2.50 and up 5.00 and up
Forest Park, West Pine and Euclid	Sgle. Dbble.	3.50 3.00 per person
Jefferson, 12th and Locust	Sgle. Dbble.	2.50 4.00 3.00 to 5.00 to
Majestic, 200 N. 11th St.	Sgle. Dbble.	2.50 4.00 to 5.00
Marquette, 18th and Washington	Sgle. Dbble.	2.00 to 2.50 3.00 to 4.00 and up
Maryland, 9th and Pine Sts.	Sgle. Dbble.	2.00 3.00 to 3.50 2.00 per person
Mayfair, 8th and St. Charles	Sgle. Dbble.	3.00 to 4.50 to
Melbourne, Grand and Lindell (Headquarters)	Sgle. Dbble.	3.00 to 4.50 to
Statler, 9th and Washington	Sgle. Dbble.	3.00 to 6.00 to
Warwick, 15th and Locust	Sgle. Dbble.	2.00 to 4.00 to
	Room with 3 persons	2.50 each 2.00 per person

Members who prefer stopping in rented rooms instead of hotels will be directed to suitable places if they will inquire at the information desk in the exhibit hall. The St. Louis Convention Bureau will have a full list of available rooms at the information desk.

ST. LOUIS CLINICS

The St. Louis Clinics as now constituted was organized at a called meeting of the temporary committee on organization, February 17, 1926, at the St. Louis Medical Society Library.

Dr. Elsworth Smith acted as temporary chairman of the meeting. Dr. Wm. Engelbach moved that the constitution and by-laws as drafted by the special committee appointed for the purpose be adopted. Dr. John Morfit moved that the present meeting should be the first annual meeting of the organization. There

followed the election of a board of directors as provided for in the constitution. Thus was inaugurated the St. Louis Clinics.

The object of the St. Louis Clinics as stated in the constitution is to bring together the clinicians and medical teachers of St. Louis with resident medical graduates and graduates visiting St. Louis for the mutual advantages to be derived from study, demonstration and observation of the medical activities in the various clinics, hospitals, and universities of St. Louis, and to meet the present and future demands of postgraduate instruction.

The real need for such an organization in every large medical center is too apparent to require special comment. Not only does it serve as a permanent bureau of information for visiting physicians where exact and accurate information can be quickly given concerning any branch of medicine and its activities for that day and hour in the city, but also it serves as an ever ready and equipped agency to correlate and schedule clinics for any medical society which should meet in St. Louis. The Program Committee of the Missouri State Medical Association was quick to recognize the usefulness of such an organization and its chairman authorized the St. Louis Clinics to have entire charge of the clinical program of the forthcoming meeting, May 18 to 20.

Since membership in the St. Louis Clinics is limited to physicians of recognized professional and legal standing, with ability or aptitude for teaching and with ample facilities for clinical and scientific teaching and demonstration, each visitor to any of the clinics sponsored by the organization is assured of not only a welcome but an honest effort to make his visit worth while from a scientific viewpoint.

IMPROVEMENT IN METHOD OF ESTABLISHING INSANITY IN CRIMINAL PROCEDURE

For many years the medical profession has realized that the common practice of employing alienists and so called experts to testify concerning the sanity of criminals pleading insanity when arrested for a criminal offense, is utterly useless. Lawyers seem to find no difficulty in obtaining medical testimony from physicians who qualify as experts in mental diseases and who will testify according to the plan laid down by the attorney. So scandalous has this phase of medical expert testimony become that some alienists refuse to testify in murder cases, and not infrequently juries and courts ignore the testimony of hired experts. A recent instance is that of Judge Kavanaugh in Chicago, who refused to accept the medical testimony of witnesses hired by the opposing lawyers in a murder case and announced that

the court would engage its own expert witnesses. Judge Kavanaugh then proceeded to ask the Chicago Medical Society to appoint three reputable physicians for the purpose, and these physicians examined the defendant and found his plea of insanity groundless. The jury found the defendant guilty and sentenced him to hang for brutally killing a young girl.

For a good many years the Missouri State Medical Association and its component societies have endeavored to find a remedy for this sad state of affairs in medical expert testimony but without success. Recently, Jackson County Medical Society adopted the following resolutions on this subject:

Be It Resolved, That the Jackson County Medical Society disapproves of the system of the defense or state employing medical witnesses for the purpose of testifying before a lay jury concerning the sanity of a defendant in a criminal trial; be it further

Resolved, That we recommend that the criminal laws be so amended that if insanity is offered as a defense by the defendant in a criminal trial, the defendant be examined by a commission of three competent alienists, said commission to be a permanent commission authorized by law or be appointed by the trial judge for the purpose of making the examination. The commission to be paid for their services by the state. Their report to be made to the trial judge in the presence of the attorneys for both defense and state, and if demand is made by either the attorneys for the defense or state the report to be made to the trial judge in the presence of the jury trying the case, and if the jury is present at the time the report is made the commission to be questioned only by the trial judge and not by the attorneys for either the defense or the state.

If the commission finds the defendant to be sane, defendant is then committed to trial for the crime of which the defendant stands accused.

If the commission finds the defendant to have been insane at the time the crime was committed and to be insane at the time of their examination the defendant is then committed to the State Hospital for the insane by order of the trial judge. Defendant is to be held in a State Hospital until recommendation is made for his release by a commission of three alienists, either appointed by the court from which the original commitment was made or by a permanent commission of alienists authorized by law, who after a thorough examination of the defendant, and an investigation of all the facts connected with the case find the defendant fully restored mentally and consider the defendant a proper person to be released from custody.

If the commission of alienists finds the defendant was sane at the time the crime was committed but insane at the time of their examination defendant is then committed to a State Hospital for the insane by order of the trial judge, defendant to be held in a State Hospital until restored mentally, then the defendant to be tried for the crime of which the defendant stands accused.

If the commission of alienists finds that the defendant was insane at the time the crime was committed but sane at the time defendant is examined by the commission defendant may be released from custody on recommendation of the commission or

committed to a State Hospital by order of the trial judge for an indefinite period of observation, and further examination by the commission, and the defendant is to be discharged only on recommendation of the commission who after an examination is convinced of defendant's sanity, also, convinced that it is safe in the interest of society to release defendant from custody.

These resolutions were introduced by Dr. G. Wilse Robinson who read a paper at the meeting, severely condemning the system of hiring medical expert testimony. This question was very thoroughly discussed at the meeting of the Association for Criminal Justice, at Columbia, April 26, and it is hoped that there will be evolved by the Association for Criminal Justice a system of state control of medical testimony in all cases where the plea of insanity is made.

CARING FOR CRIPPLED CHILDREN

Several years ago, the St. Louis Medical Society, with the cooperation of the St. Louis *Post-Dispatch*, undertook to care for crippled children whose parents or guardians were unable to pay for medical service, and succeeded in placing a large number of these unfortunate little ones in the hospitals in St. Louis.

The Missouri Federation of Women's Clubs became interested in this movement, and through the earnest endeavors of Mrs. Chas. W. Greene, Chairman of the Child Welfare Division of the Women's Clubs, a survey of the state has been made and deserving cases of crippled children have been located in more than 100 counties in the state. In her report to the Women's Clubs Mrs. Greene states that the Child Welfare Division has chosen for this biennial period to center all its effort on one activity—the survey and salvage of indigent crippled children in Missouri. As a result of that effort an organization has been created that includes the cooperation and functioning of the following:

A crippled children chairman in more than 100 counties, who have found the childrep.

County Medical Associations in more than 100 counties, who have examined the children.

State Medical Association, and State Board of Health, which have given publicity and advice.

All the leading railroads of the state, which have given free transportation.

The leading hospitals of St. Louis and Kansas City, who have given free hospitalization.

The best orthopedists of St. Louis and Kansas City, who have given free treatment.

The Rotarians of St. Louis and private individuals of Kansas City who have furnished free appliances.

This organization is now functioning and for four months a small but steady stream of patients has been moving to the hospitals. Up to

this time 70 cripples have had examination by skilled orthopedists of St. Louis, and 40 of these have had hospital treatment.

Probably no other organization could direct this philanthropic movement so worthily or so acceptably as the Women's Clubs. Many of these children can be restored to perfectly normal condition and the condition of nearly all the others accepted for treatment can be improved.

NEWS NOTES

Dr. Howard M. Smith, negro physician, Kansas City, has been appointed head of the old City Hospital where negro patients are cared for.

The next regular meeting of the State Board of Health for the examination of applicants to practice medicine will be held in St. Louis at the St. Louis University, on June 28, 29, 30 and July 1.

Dr. John Lavan, Kansas City, who has been city epidemiologist for a number of years, has been reappointed under the new administration as Commissioner of Child Hygiene and Communicable Diseases.

Dr. E. W. Caveness, Kansas City, has been appointed Health Commissioner of Kansas City, and took charge of the health division on April 10, succeeding Dr. Herman E. Pearse, who has been filling the position temporarily until the provisions of the new charter went into effect.

Hospital Day at State Hospital No. 3, Nevada, on May 12, will be observed by having the doors of the Institution thrown open to the public from two o'clock until four o'clock. During that time music will be furnished by the hospital band. The public is cordially invited to visit the Institution on that day.

Dr. Porter Williams, of Boonville, has been appointed Superintendent of the General Hospital at Kansas City and took charge of the institution on April 14. Dr. Williams has served for 12 years as Superintendent at three state hospitals, his last service being at State Hospital No. 2, at St. Joseph.

In addition to the examination held at Dallas on April 19 and at San Francisco on April 27, the American Board of Otolaryngology will hold another examination at the Otolaryngological Clinic, Royal Victoria Hospital, Montreal, on Tuesday, June 1. Information may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

Butler County has claimed that the oldest physician in the state of Missouri, from a standpoint of service, is Dr. A. W. Davidson, of Poplar Bluff, who has been practicing 50 years. Now this honor is being contested by Sikeston citizens who claim they have in their midst a physician who is 80 years old, and who is still practicing after 58 years of active service. This late candidate is Dr. O. E. Kendall, Sikeston.

The women physicians who are members of the St. Louis Medical Society send an invitation to all women physicians throughout the State who are members of the State Medical Association to attend a dinner at the Coronado Hotel, St. Louis, at 6:30 Tuesday evening, May 18. In order that the St. Louis women physicians may have knowledge of how many guests to provide for, it is requested that the women members of our Association who expect to attend our annual meeting, write Dr. Lillian V. Young, 4511 North 20th St., St. Louis.

The St. Louis Medical Society has appointed the following entertainment committee for the annual session of our Association, May 17-20:

Fred Bailey, Chairman	W. W. Graves
Hillel Unterberg,	E. H. Higbee
Vice-Chairman	Roland Hill
Amand Ravold	Robert Hyland
Robert E. Schlueter	M. L. Klinefelter
Albert H. Hamel	J. Curtis Lyter
Emmett P. North	H. S. McKay
Willard Bartlett	Marsh Pitzman
Walter Baumgarten	Francis Reder
Frances Bishop	Edwin Schisler
V. P. Blair	M. G. Seelig
Henrietta A. S. Borck	John U. Tierney
Florence H. Bullis	Wm. H. Vogt
John R. Caulk	Charles A. Vosburgh
Wm. T. Coughlin	Fred E. Woodruff
E. Lee Dorsett	R. A. Woolsey
O. P. J. Falk	O. B. Zeinert
E. C. Funsch	

Golf Committee

C. E. Hyndman, Chairman	J. M. Thompson
L. H. Slocumb, Vice-chairman	V. V. Wood
S. S. Burns	

The Christian Church Hospital, of Kansas City, Missouri, has been leased to the United States Veterans' Bureau. This will release the hospital formerly owned and operated by Dr. J. A. Robertson, under the name of Wesley Hospital, Kansas City, and Dr. Robertson announces that he will re-open the Wesley Hospital about August 1. The Veterans' Bureau will vacate the Wesley Hospital June 30.

Dr. Robertson also announces that Dr. Rush E. Castelaw who was formerly Superintendent of the Wesley Hospital will return to Kansas City and again take charge of the institution.

Dr. Castelaw has been Superintendent of the General Hospital at Williamsport, Pa., for the past year and a half.

Two new buildings were dedicated at the St. Louis Training School on April 9. Jordan Hall, named for the lamented Dr. G. Alex. Jordan, is an employee's building of forty rooms. Kiel Hall, named for the former Mayor, is a school building. Mayor Miller, and many department and hospital chiefs, Mr. Kiel, Mr. Cunliff, numerous friends of the school, and the North St. Louis Business Men's Association officers were present. Short talks were made by Mayor Miller, Director Kinsey, Commissioner Shankland, Mr. Werremeyer, ex-Mayor Kiel, Mr. Cunliff, Dr. Lewald and Dr. Bliss. A luncheon was served. The exercises were held under the auspices of the North St. Louis Business Men's Association.

The development of the modern public health program and the place of that program in community welfare will be discussed at several sessions of the Mid-Mississippi Valley Conference on Community Welfare, which is to be held, under the joint auspices of Washington University and the Saint Louis Community Council, at the Saint Louis City Club on May 9, 10 and 11.

Dr. M. P. Ravenel, of Missouri University, and Dr. Jesse S. Williams, Professor of Physical Education at Columbia University, New York, are two speakers on this subject.

Dean Isador Loeb, of the School of Commerce and Finance, Washington University, who is a member of the executive committee planning the conference, said recently in reference to its purpose and aim: "The Mid-Mississippi Valley Conference on Community Welfare will be of much service to all the communities within this area. Our modern complex civilization has brought about a revolution not only in political and economic institutions but also in social relations and problems. New methods and specially trained workers are needed to deal with conditions arising from ignorance, poverty, disease and immorality. The Conference will contribute to a better understanding of these important problems and of proper agencies that are essential to their satisfactory solution."

The Physicians' Home, Inc., is making good progress in its movement to raise sufficient funds for the establishment of homes for incapacitated and indigent physicians. The medical profession as well as the laity have responded most generously.

Three units have been definitely decided upon, each to be located in separate divisions of

the country. One of these units, the first under contemplation, is to be established in the Northeastern territory, which includes Pennsylvania, New Jersey, New York and the six New England states. For this territory, an option has been secured on Downsburry Manor, the 300 acre estate of Colonel Edward M. Knox, "Knox, the Hatter," located at Ridgefield, Conn., fifty miles from New York City, and centrally located in the group of states mentioned. This beautiful home has been offered to the Physicians' Home, Inc., at a gift price of \$125,000.

The Southern territory will include the states from Maryland to Florida. For the home in this section, the purchase of a new steel and brick building erected in 1922 by the late Dr. G. T. Divers, at Stuart, Va., is contemplated. The building was to have been a private sanatorium, and contains 50 rooms and several out-buildings. The cost of this building was approximately \$250,000. Mrs. Divers is now offering the property at \$100,000. Should the Physicians' Home, Inc., purchase, Mrs. Divers will donate \$45,000, thus making the price only \$55,000.

The next step, which will interest every physician in Missouri, is that of securing a site somewhere in the Middle West territory, most probably in southern Illinois or Missouri, on account of climatic advantages. Every effort on the part of the medical profession of Missouri to secure the establishment of this third home in Missouri is to be exerted.

The fourth unit will be located in the Golden Gate territory, with California as the central point. The states included in this territory are, California, Oregon, Idaho, Washington, Arizona, Nevada, and Utah.

All checks are to be made payable to The Physicians' Home, Inc., Times Bldg., New York.

OBITUARY

CHARLES PINCKNEY HOUGH, M.D.

Dr. Charles Pinckney Hough, long a prominent figure in the professional and social life of Jefferson City, Mo., died March 12, 1926, at his home on Capitol Avenue.

Dr. Hough, who was a native of Jefferson City, was born April 14, 1845, and was the son of George W. Hough and Mary Catherine Shawen, both natives of Loudoun County, Virginia.

In his boyhood he served as a purser on a Missouri steamboat, afterwards being transferred to a Mississippi River boat, plying between St. Louis and Vicksburg. Subsequently he engaged in merchandising in St. Louis, but preferring the medical profession he began studies which culminated in his graduating

from the Missouri Medical College, St. Louis, with high honors, in 1875. During the course of his medical career, he found occasion to visit Europe for special study in Berlin, Paris and London, his last journey abroad for that purpose having been made in 1893.

In 1878 he removed to Butte, Mont., then a rising city of the northwest just entering upon its flourishing development as a great mining center. He remained there until 1895, becoming one of the best known physicians in the state. He held numerous offices in the city of Butte connected with his profession. He was surgeon of the Union Pacific & Montana Central Railways; physician to St. James' Hospital and Anaconda Mining Co.; chief medical examiner of the Equitable Life Insurance Company; and Surgeon General of the state for three successive terms. As Chief Health Officer of the Montana city he introduced many reforms in sanitation and health improvement which still cause him to be remembered in that city.

In 1895 he removed to Salt Lake City, Utah, and was in active practice until 1902. While a resident of Utah he was elected president of the Rocky Mountain Interstate Medical Association, embracing a membership in several of the intermountain states. In 1902 he returned to his birthplace, Jefferson City, and became actively identified with the work of his profession, continuing until a few years ago when he retired. He was vice president of the Missouri State Medical Association at one time, and was a member of the American Medical Association and of the Association of Military Surgeons of the U. S. A.

He was married September 22, 1891, to Miss Elizabeth Trigge Thornton, eldest daughter of Colonel J. C. C. Thornton, a Confederate soldier of distinction, who was conspicuous in the early history and development of Montana. Mrs. Hough is a niece of A. W. Doniphan, Missouri's celebrated hero of the Mexican War. To this union was born one son, Charles Cotesworth Pinckney Hough. Mrs. Hough and son survive him.

Dr. Hough, a gentleman of the old school, was a man of rare qualities and personal attainments, dignified in bearing, but cordial in manner and warm in his friendships. His devotion to the profession adopted in his youth was inseparable from his life work, and as a physician he ranked among the best in the sections of the country wherein he practiced, his professional life being characterized by the highest ideals. His fidelity to honor and his fine character marked him strongly among a large circle of friends and acquaintances. His death will be sincerely mourned by many who knew him well and their sympathy goes out to the surviving members of his family.

MISSOURI STATE MEDICAL ASSOCIATION
69TH ANNUAL MEETING

The 69th Annual Meeting of the Association convenes at St. Louis, Tuesday, Wednesday and Thursday, May 18, 19, 20. The House of Delegates will convene Monday, May 17, and hold its first session when a large part of the business of the Association will be transacted without interfering with the scientific proceedings on the following days. It will be noted that the mornings of Tuesday and Thursday are to be devoted to clinics at the several hospitals and on Wednesday morning there will be a diagnostic clinic at the Auditorium. All sessions, except the clinics at the hospitals, will be held in the Auditorium of the St. Louis University. The registration booth and the exhibits will also be located in the Auditorium. The program follows:

THE COUNCIL

First Meeting—Monday, May 17, 1926—1:00 P. M., Class Room, St. Louis University, 3642 Lindell Blvd.

1st District.....	Austin McMichael, Rockport
2nd District.....	H. S. Conrad, St. Joseph
3rd District.....	F. H. Broyles, Bethany
4th District.....	Geo. M. Bristow, Princeton
5th District.....	J. R. Bridges, Kahoka
6th District.....	J. S. Gashwiler, Novinger
7th District.....	T. J. Downing, New London
8th District.....	B. P. Wentker, St. Charles
9th District.....	A. R. McComas, Sturgeon
10th District.....	D. A. Barnhart, Huntsville
11th District.....	J. H. Timberman, Chillicothe
12th District.....	Spence Redman, Platte City
13th District.....	Geo. E. Bellows, Kansas City
14th District.....	C. T. Ryland, Lexington
15th District.....	L. J. Schofield, Warrensburg
16th District.....	T. B. M. Craig, Nevada
17th District.....	Guy Titsworth, Sedalia
18th District.....	W. L. Allee, Eldon
19th District.....	W. A. Clark, Jefferson City
20th District.....	St. Louis
21st District.....	Thos. F. Estel, Altenburg
22nd District.....	G. S. Cannon, Farnfeld
23rd District.....	T. J. Rigdon, Kennett
24th District.....	T. W. Cotton, Van Buren
25th District.....	R. W. Gay, Ironton
26th District.....	W. H. Breuer, St. James
27th District.....	J. C. B. Davis, Willow Springs
28th District.....	A. L. Anderson, Springfield
29th District.....	R. L. Wills, Neosho

Second Meeting of the Council—Wednesday, May 17, 1926, after House of Delegates Adjourns. Class Room, St. Louis University

DELEGATES

County	Delegate	Address
Adair	J. S. Gashwiler.....	Novinger
Atchison	E. P. Taylor.....	Fairfax
Audrain	J. F. Jolley.....	Mexico
Barry		
Bates	G. H. Thiele.....	Butler
Benton	O. L. Cuddy.....	Lincoln
Boone	J. E. Thornton.....	Columbia
Buchanan	{ H. W. Carle.....	{ St. Joseph
	{ J. F. Owens.....	
Butler	H. M. Henrickson.....	Poplar Bluff
Caldwell	B. F. Carr.....	Polo
Callaway	G. D. McCall.....	Fulton
Camden		
Cape Girardeau.....	M. H. Shelby.....	Cape Girardeau
Carroll	R. F. Cook.....	Carrollton
Carter-Shannon	A. Johnston.....	Grandin
Cass	T. W. Adair.....	Archie
Chariton	W. D. West.....	Mendon

<i>County</i>	<i>Delegate</i>	<i>Address</i>
Christian	H. J. Wise.....	Sparta
Clark	R. G. Callihan.....	Luray
Clay	J. E. Baird.....	Excelsior Springs
Clinton		
Cole	E. E. Mansur.....	Jefferson City
Cooper		
Crawford		
Dallas		
Daviess	L. R. Doolin.....	Gallatin
Dekalb		
Dent		
Dunklin	E. L. Spence.....	Kennett
Franklin	H. A. May.....	Washington
Gasconade-Maries-Osage	M. E. Spurgeon.....	Red Bird
Gentry	J. A. Crockett.....	Stanberry
Greene	{ Jos. W. Love.....	} Springfield
	{ P. F. Cole.....	
Grundy	J. F. Fair.....	Trenton
Harrison		
Henry	R. D. Haire.....	Clinton
Holt	J. L. Cox.....	Fortescue
Howard	V. Q. Bonham.....	Fayette
Howell-Oregon	H. A. Thompson.....	Lanton
Iron		
	1926	
	G. Wilse Robinson.....	
	Harry L. Jones.....	
	Sam Roberts.....	
	Ralph W. Holbrook.....	
Jackson	Edgar F. DeVilbiss.....	} Kansas City
	1926-27	
	William A. Shelton.....	
	Frederick C. Rumsey.....	
	Morris H. Clark.....	
	Edward L. Stewart.....	
	Tom Twyman.....	
Jasper	L. C. Chenoweth.....	Joplin
Jefferson	N. W. Jarvis.....	Festus
Johnson	J. I. Anderson.....	Warrensburg
Knox		
Laclede	H. A. Hamilton.....	Lebanon
Lafayette	E. M. Moore.....	Corder
Lawrence-Stone	F. S. Stevenson.....	Aurora
Lewis		
Linn		
Livingston	F. H. Emmons.....	Chillicothe
Macon		
Madison	E. E. Higdon.....	Fredericktown
Marion	J. J. Bourn.....	Hannibal
Mercer	R. O. Lieuallen.....	Princeton
Miller	G. D. Walker.....	Eldon
Mississippi	A. H. Marshall.....	Charleston
Moniteau	J. B. Norman.....	Tipton
Monroe		
Montgomery	Buell Menefee.....	Montgomery
New Madrid	W. N. O'Bannon.....	New Madrid
Newton	C. E. Maness.....	Neosho
Nodaway	H. S. Dowell.....	Maryville
Pemiscot	J. W. Johnson.....	Hayti
Perry		
Pettis	A. J. Campbell.....	Sedalia
Phelps	S. L. Baysinger.....	Rolla
Pike	D. C. Scott.....	Louisiana
Platte	S. L. Durham.....	Dearborn
Pulaski	C. Mallette.....	Crocker
Putnam		
Ralls	J. D. Brown.....	Perry
Randolph	G. O. Cuppaidge.....	Moberly
Ray	Robt. L. Hamilton.....	Richmond
Reynolds	C. M. Fitzpatrick.....	Lesterville
St. Charles.....	Erich Schulz.....	St. Charles
St. Francois.....		
Ste. Genevieve.....	J. A. Wilkins.....	St. Marys

<i>County</i>	<i>Delegate</i>	<i>Address</i>
St. Louis	J. H. Armstrong.....	Kirkwood
	1926	
	Fred Bailey	
	W. W. Graves.....	
	C. E. Burford.....	
	W. H. Vogt.....	
	A. H. Hamel.....	
	John C. Morfit.....	
	T. C. Hempelmann.....	
St. Louis City.....	William Kerwin	St. Louis
	H. Unterberg	
	John Green	
	1926-27	
	Amand Ravold.....	
	S. T. Bassett.....	
	W. D. Black.....	
	H. M. Moore.....	
	C. H. Shutt.....	
Saline	F. A. Howard.....	Malta Bend
Schuyler		
Scotland		
Scott	U. P. Haw.....	Benton
Shelby		
Stoddard	Frank LaRue.....	Dexter
Taney	Guy B. Mitchell.....	Branson
Texas	Leslie Randall.....	Licking
Vernon-Cedar	G. C. Willson.....	Nevada
Wayne		
Webster	E. M. Bailey.....	Elkland
Wright-Douglas	E. C. Wittwer.....	Mountain Grove

PROGRAM

HOUSE OF DELEGATES

First Meeting—Monday, May 17, 1926—9:30 A. M. Class Room, St. Louis University, 3642 Lindell Blvd.

Roll Call.
 Reading of Minutes of Previous Meeting.
 Reading of President's Message and Recommendations.
 Report of Committee on Arrangements.
 Report of Secretary.
 Report of Treasurer.
 Report of Committee on Scientific Work.
 Report of Committee on Health and Public Instruction.
 Report of Defense Committee.
 Report of Committee on Medical Education.
 Report of Committee on Hospitals.
 Report of Committee on Constitution and By-Laws.
 Appointment of Committee on Nominations.

Recess till 3:00 P. M.

Report of the Council.
 Report of Reference Committees.
 Reading of Resolutions, Memorials, etc.
 Selection of Place of Next Meeting.
 Miscellaneous Business.

Second Meeting, Wednesday, May 19, 1926—9:30 A. M.—Class Room, St. Louis University, 3642 Lindell Blvd.

Reading of Minutes.
 Election of President.
 Report of Nominating Committee.
 Election of Officers.
 Unfinished Business.

GENERAL MEETING

Tuesday, May 18, 1926—9:00 to 12:00 A. M.

Special hospital clinics under direction of St. Louis Clinics.

GENERAL MEETING

Tuesday, May 18, 1926—1:30 P. M. Auditorium, St. Louis University,
3642 Lindell Blvd.

- Radiation in the Treatment of Non-Malignant Conditions of the Uterus
.....Clyde O. Donaldson, M.D., Kansas City.
Discussion opened by Dr. E. C. Ernst, St. Louis.
- The Management of Various Types of Bleeding Uterine Myoma.....
.....H. S. Crossen, M.D., St. Louis
Discussion opened by Dr. D. C. Guffey, Kansas City.
- Symposium on Obstetrical Emergencies:
Care and Treatment of Eclampsia...Geo. F. Pendleton, M.D., Kansas City
Occipito-Posterior Presentation.....L. M. Riordan, M.D., St. Louis
Breech Presentations.....W. C. Gayler, M.D., St. Louis
Significance of Meconium in the Vagina During Labor.....
.....F. E. Wilhelm, M.D., Kansas City
Management of the Syphilitic Expectant Mother.....
.....T. H. Aschmann, M.D., Kansas City
Display of Prenatal Roentgenograms...P. F. Titterington, M.D., St. Louis
Discussion opened by Dr. George Gellhorn and Dr. Percy Swahlen.

GENERAL MEETING

Wednesday, May 19, 1926—9:00 A. M. Auditorium, St. Louis University,
3642 Lindell Blvd.

- Diagnostic Clinic—Chest Diseases:
Sam Snider, M.D., Kansas City.
A. H. Sante, M.D., St. Louis.
C. H. Nielson, M.D., St. Louis.
- Diagnostic Clinic—Heart Diseases:
J. C. Lyter, M.D., St. Louis.
C. C. Connover, M.D., Kansas City.
P. T. Bohan, M.D., Kansas City.

GENERAL MEETING

Wednesday, May 19, 1926—1:30 P. M., Auditorium, St. Louis University,
3642 Lindell Blvd.

- The Diagnosis of Gallbladder Disease....Evarts A. Graham, M.D., St. Louis
The Gallbladder and the Surgeon.....Francis Reder, M.D., St. Louis
Discussion opened by Dr. Sherwood Moore and Dr. H. P. Kuhn.
- What We Accomplish by Operating Upon Exophthalmic Goiter Patients
.....Willard Bartlett, M.D., St. Louis
- The Surgical Goiter.....Kerwin Kinard, M.D., Kansas City
Discussion opened by Dr. M. A. Bliss and Dr. E. V. M. Mastin.
- Non-Tuberculous Hips in Children Simulating Tuberculosis.....
.....C. B. Francisco, M.D., Kansas City
- The Treatment of Tuberculosis of the Hip....J. Albert Key, M.D., St. Louis
Discussion opened by Dr. LeRoy C. Abbott and Dr. M. L. Klinefelter.
- Some Points on the Diagnosis of Brain Abscess.....
.....O. Jason Dixon, M.D., Kansas City
Discussion opened by Dr. Frank J. Tainter, St. Louis.
- Acute Appendicitis, With Report of 600 Consecutive Cases.....
.....H. K. Wallace, M.D., St. Joseph.
Discussion opened by Dr. Elliott K. Dixon.

GENERAL MEETING

Wednesday, May 19, 1926—8:00 P. M. Auditorium, St. Louis University,
3642 Lindell Blvd.

- President's Address.....Emmett P. North, M.D., St. Louis
Address.....John A. Witherspoon, M.D., Nashville, Tenn.
Address.....Jabez N. Jackson, M.D., Kansas City,
President-Elect, American Medical Association.
- Achievements in the Prevention of Blindness.....
.....F. Park Lewis, M.D., Buffalo, N. Y.

GENERAL MEETING

Thursday, May 20, 1926—9:00 A. M.
Special hospital clinics under direction of St. Louis Clinics.

GENERAL MEETING*

Thursday, May 20, 1926—1:30 P. M. Auditorium, St. Louis University,
3642 Lindell Blvd.

Diagnostic Clinic:

Duodenal and Gastric Ulcer.....
.....John A. Witherspoon, M.D., Nashville, Tenn.

Symposium on Nephritis:

Classification and Functional Capacity in Chronic Nephritis.....
.....R. A. Kinsella, M.D., St. Louis

Blood Changes in Chronic Nephritis...W. A. Myers, M.D., Kansas City

Cardio-Vascular Complications in Chronic Nephritis.....
.....John L. Tierney, M.D., St. Louis

Discussion opened by Dr. B. B. Barr and Dr. Walter Fischel.

Concentrated Feeding in Infancy.....Hugh L. Dwyer, M.D., Kansas City

Discussion opened by Dr. Hugh McCulloch.

Action of Tobacco and Other Tar Extracts Upon Epithelial Cells.....
.....F. C. Helwig, M.D., Kansas City

CLINICS AT WASHINGTON UNIVERSITY

The Washington University School of Medicine will present clinics and demonstrations on Tuesday, May 18, 1926, from 9 a. m. to 1 p. m.

Obstetrical Department

The Obstetrical Department will offer clinics on the following subjects:

Intracranial injuries.
Puerperal sepsis.
Toxaemias of pregnancy.
Points in prenatal care.

Medical Department

The Medical Department will offer clinics on the following subjects:

Angina pectoris.
Asthma.
Chronic colitis.
Use of pneumothorax.
Skin conditions.
Encephalitis.

Pediatric Department

The Pediatric Department will offer clinics on the following subjects:

Infant feeding cases.
Nephritis in childhood.
Diabetes in young children.
Hydrocephalus.
Chorea.
Pyloric stenosis.
Acidosis and alkalosis.
Intestinal obstruction.

Surgical Department

The Surgical Department will offer clinics on the following subjects:

Operative Clinics—9:00 to 1:00.

Demonstrations:

Neurosurgical cases.
Oral and plastic cases.
Chest and surgical cases.
Bone changes in Recklinghausen's disease.
Effects of pressure in urinary bladder with reference to origin of diverticulæ of bladder.
Genito-urinary cases.
Gynecological cases.
Lipiodol in gynecological diagnosis.
Orthopedic cases and motion pictures.

Special Demonstrations

- * Emptying of gallbladder with reference to Lyon test.
- * Extrahepatic lymphatics of biliary system.
- * Experimental studies on cancer.
- * Brain tumors.

- * Cholecystography (X-ray demonstration).
 - * Methods of physical therapy, including diathermy, heliotherapy, etc.
 - * Demonstration of otolaryngological procedures, including use of lipiodol in diagnosis, etc.
 - * Electrocardiography.
 - * Diet kitchen for metabolism ward.
 - * Diagnosis of chest conditions.
 - * Asthma.
 - * Basal metabolism.
 - * Microscopic slides of blood diseases.
 - * Radiotherapy.
 - * Limited number of visitors only can be accommodated.
- Admission by card which can be obtained at registration desk.

CLINICS AT ST. LOUIS UNIVERSITY

The Departments of Internal Medicine and Surgery of the St. Louis University School of Medicine will present clinics on Thursday, May 20, 9 a. m. to 1 p. m.

Department of Internal Medicine

The Department of Internal Medicine will offer clinics on the following subjects:

- Pneumonia.
- Diseases of the blood.
- Nephritis.
- Heart diseases.
- Diseases of the Ductless Glands.

In these Clinics the clinical, pathological and research features will be correlated by the speakers. The following will participate in the discussions: Drs. Kinsella, Neilson, Broun, Tierney, Briggs, Shrader and Doctors Doisy, of the Department of Biochemistry, and Collier, of the Department of Pathology.

The clinics will be held in the Amphitheatre at the Medical School Building, 1402 South Grand Boulevard, on Thursday forenoon, May 20, from 8:30 to 12:30. There will be accommodations for two hundred.

Lunch may be obtained in the Cafeteria at the Medical School.

Department of Surgery

The Department of Surgery will offer clinics as follows:

- * St. Mary's Hospital—Drs. Coughlin, Rassieur and Clancy.
(Clayton and Bellevue.)
- * St. Mary's Infirmary—Drs. Leighton and Rassieur.
(1536 Papin Street.)
- * St. John's Hospital—Drs. Glennon and Dean.
(Euclid and Parkview.)
- * St. Anthony's Hospital—Drs. McKay and Tainter.
(Grand and Chippewa.)
- * Alexian Bros. Hospital—Drs. Carroll Smith and Hutton.
(3933 South Broadway.)
- * City Hospital—Drs. Myer, Sherwin and Tainter.
(1515 Lafayette Avenue.)

The detailed programs, giving hours and schedules, will be distributed on the first day of the meeting.

- * Limited number of visitors only can be accommodated.

Admission by card which can be obtained at registration desk.

WOMEN'S AUXILIARY TO THE MISSOURI STATE MEDICAL ASSOCIATION

Tuesday, May 18, 1926—10:00 A. M. Coronado Hotel, Spring and Lindell

Meeting of the Executive Board of the State Auxiliary.

Tuesday, May 18, 1926—12:30 P. M.—St. Louis Women's Club

Luncheon. Women's Auxiliary to the St. Louis Medical Society in honor of the State Executive Board, State Delegates and Visiting Ladies. Followed by drive through beautiful and interesting parts of the city including visits to the Art Museum, Zoo and Missouri Botanical Gardens.

Wednesday, May 19, 1926—9:30 A. M.—Coronado Hotel

Cooperative Health Work in Counties.....
.....Dr. R. L. Russell, State Board of Health
Division of Vital Statistics.....
.....Dr. Ross Hopkins, Statistician, State Board of Health
The Program of Health Education in Our Public Schools.....
Dr. Henry S. Curtis, State Director of Hygiene and Physical Education
Duties of a Public Health Nurse.....
.....Miss Elizabeth Simon, State Board of Health

Wednesday, May 19, 1926—12:00 noon—Coronado Hotel

Invocation.....Rt. Rev. Frederick F. Johnson, Bishop of Missouri
Luncheon. Guests of Honor:
Dr. James Stewart, State Health Commissioner.
Dr. H. E. Pearse, Chairman Committee on Health and Public In-
struction, Missouri State Medical Association.

Wednesday, May 19, 1926—2:00 P. M.—Coronado Hotel

Annual Meeting of State Auxiliary.
Reports of Officers.
Reports of County Auxiliaries.
Report of the Dallas Meeting.
Reports of Chairmen of Standing Committees.
Report of Nominating Committee.
Election of State Officers.
Report of Committee on Plans for Coming Year.
Report of Committee on Resolutions.
Adjournment.

COMMERCIAL EXHIBITORS

The Lounge, St. Louis University Law School, 3642 Lindell Blvd.

A. S. Aloe Company, Surgical Supplies.....St. Louis, Mo.
Cameron's Surgical Supply Company, Surgical Supplies.....Chicago, Ill.
DeVilbiss Mfg. Co., Sprays.....Toledo, Ohio
Dick X-ray Company, X-ray and Physiotherapy Equipment....St. Louis, Mo.
Hanovia Chemical & Manufacturing Company, Scientific
and Therapeutic Apparatus.....Newark, N. J.
Hettinger Bros. Mfg. Co., Surgical Supplies.....Kansas City, Mo.
Horlick's Malted Milk Co., Malted Milk.....Racine, Wis.
Magnuson X-Ray Co., X-Ray Apparatus.....Omaha, Neb.
Maltbie Chemical Co., Calcreose.....Newark, N. J.
L. S. Matthews & Co., Medical Books.....St. Louis, Mo.
Mellins Food Co., Infant's Diet Materials.....Boston, Mass.
Merrell-Soule Co., Klim (Powdered Milk).....Syracuse, N. Y.
C. V. Mosby Co., Medical Publishers.....St. Louis, Mo.
Mountain Valley Water Co., Mineral Water.....St. Louis, Mo.
E. R. Squibb & Sons, Chemical, Pharmaceutical and
Biological Products.....New York, N. Y.
Victor X-ray Corp., X-ray and Physiotherapy Equipment.....Chicago, Ill.

EIGHTEENTH ANNUAL MEETING OF MISSOURI SOCIETY OF
MEDICAL SECRETARIES

Wednesday, May 19, 1926—6:00 P. M.—Melbourne Hotel

The Secretaries will meet in The Lounge of the Melbourne Hotel, Grand
& Lindell Blvd. at 6:00 P. M. Dinner will be served.
Dr. J. T. Hornback, Secretary. Dr. Geo. H. Thiele, President.

PROGRAM

Address of Welcome.....Dr. George H. Thiele
Address.....Dr. Emmett P. North, President State Medical Association
Address.....Dr. John A. Witherspoon, Nashville, Tenn.
Address.....Dr. E. J. Goodwin, Secretary State Medical Association
Round Table Talk: Influence of County Medical Society in the Community.
Led by Dr. W. H. Breuer, St. James.
Election of officers.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

- Camden County Medical Society, November 23, 1925.
Howard County Medical Society, January 8, 1926.
Ralls County Medical Society, February 27, 1926.
Camden County Medical Society, November 23, 1925.
Howard County Medical Society, January 8, 1926.
Ralls County Medical Society, February 27, 1926.
Schuyler County Medical Society, March 25, 1926.
Franklin County Medical Society, March 29, 1926.
Monroe County Medical Society, April 14, 1926.

PROCEEDINGS OF THE KANSAS CITY ACADEMY OF MEDICINE

Meeting of November 13, 1925

CARCINOMA OF THE VULVA.—By DR. E. D. TWYMAN AND CHARLES S. NELSON.

We are reporting on twenty-six cases. Six of these were treated personally and twenty were collected from Kansas City sources. In time this covered a period of about twelve years and is a large number when one considers that up to 1925 only nineteen cases could be found in the records of all services of Johns Hopkins University since its opening. Eight of the cases in our report had much better than the expected duration of life. One case (personal) was nearly a literary record, being alive eight and one-half years after operation when a small recurrence was removed; nearly nine years now and still well. Another one is three and one-half years without recurrence.

Most authors agree on the extreme malignancy and bad prognosis of cancer of the vulva. To quote the typical view, Robert Tilden Frank says: "Vulva carcinoma is notorious for its malignancy and frequent recurrence after operation." Ewing takes the same view and quotes Deitrich to the effect that the literature affords no case alive six years after operation. This apparently overlooks the case of Fraenkel which was operated on three times, surviving twenty-four years, the literary record. It also overlooks a report by A. H. Lewers and discussion reporting cases well nine months, three years, six and three-fourths years, eight years, nine years, eleven years and thirteen years after operation. Taussig also reports some very favorable results.

We wish to stress these favorable reports as an offset to the hopeless attitude current in the literature. We wish to emphasize the eight favorable results in Kansas City with seven other cases too early to finally classify, so that between a third and

a half of the cases may have a relatively favorable outcome. We think the usual histology makes this a reasonable expectation as an average. We favor radical dissection with electrocautery with or without later radiation. We think this study suggests that cancer of the vulva is more common in our district than had been supposed and that the current advice has been too pessimistic, surgical attack too conservative and too long delayed.

DISCUSSION

DR. E. H. SKINNER: My experience has been limited. The one case I saw was of the infiltrating type that had been present for some time in a woman who was at least seventy years of age. We gave her both radium and X-ray treatment which seemed to halt things. She lived two years after I first saw her and died from liver metastasis.

I think those of us who come in contact with malignancy are impressed more and more with the necessity of seeing all cases earlier because it is only in early recognition that there is any hope of cure.

The education of the public has advanced, but not to the degree that the extensive propaganda would anticipate. Possibly the profession itself would appreciate more educational papers upon the early appearances of potential cancer lesions.

As one method of stimulating more local interest one might suggest that the Academy establish itself as the local mouthpiece of the American Society for the Control of Cancer and promote educational propaganda among the laity. Thus, by becoming teachers of the public our members would inform themselves more thoroughly.

The method that Dr. Twyman has pursued in collecting the total community incidence of a definite clinical manifestation of malignancy will serve to spread the interest and knowledge of the cancer problem.

DR. J. E. STOWERS: I remember back in Baltimore one case on the gynecological service where Dr. Kelly elaborated at length on epithelioma of the labia. At that time Dr. Kelly was very much interested in applying radium. He used radium several times and finally one morning brought her into the clinic and did a very extensive operation on her.

The early recognition and treatment of the cancerous lesion I think is the secret of our success.

DR. H. R. WAHL: I have seen a number of these cases as they came into the laboratory for examination. They are often very extensive infiltrating tumors. It is not a very uncommon type of malignancy.

DR. E. D. TWYMAN: I would like to comment on Dr. Skinner's remark that some cases one has are early and yet turn out badly in spite of that. These cases are not so common, about 5 per cent. to 10 per cent. only. They are practically always tumors with very little cell differentiation.

Dr. Stowers remarked about Dr. Kelly's treatment with radium. I think the following is a pretty fair rule so far as we have gone: If a growth is superficial enough to reach, it should be operated. There is plenty of room for radiologists to work on things we cannot reach with cautery or knife and we are glad they are here to take it away from us. I want to be as conservative as I can.

ON BLOOD PRESSURE.—By PAUL M. KRALL, M.D.

The term "blood pressure" signifies the tension under which the blood circulates or traverses the cardiovascular channels of the living being. Factors concerned in the mechanism and maintenance of a normal blood pressure are:

A. Primary factors.

1. Vasomotor tone.
2. Myocardial tone.
3. Quantity and viscosity of blood.
- B. Secondary or excessory factors.
 1. Time of day.
 2. Position.
 3. Respiration.
 4. Tone of skeleton muscles.
 5. Food.
 6. Architectural configuration (hypoplastic type).
 7. Endocrine system.

The normal blood pressure for a given individual depends upon the normal correlation and interaction of the variable factors enumerated. Disturbance in the vasomotor mechanism may readily alter the blood pressure complex, as is evidenced in fainting; that the tone of the myocardium is a big factor in the maintenance of the normal blood pressure complex is evidenced in cases with so called loss of myocardial tone; that the quantity of blood is concerned in the maintenance of blood pressure is likewise evidenced by the fall in blood pressure in cases of hemorrhage.

The secondary or excessory factors. Blood pressure is higher toward rising or early in the morning; position likewise influences blood pressure in that under normal circumstances blood pressure is higher in the erect position than it is in the recumbent position; food does influence blood pressure as is well known; the architecture of the individual frequently makes for blood pressures that are not comparable with the normal values when normal standards are considered. This is particularly so in the so called hypoplastic type of individual. Diseases of the endocrine system must ever be considered. For instance, not a few cases of hyperthyroidism show high blood pressure values; others again show subnormal values, but disease of the suprarenal glands offers a very distinct picture, particularly in Addison's disease in which we encounter hypotension values.

Clinically, in the interpretation of blood pressure, the systolic blood pressure represents the maximal effort of the myocardium, during the period of systole. It is the sum total of the pulse pressure and the diastolic blood pressure. The diastolic blood pressure represents the sum total of peripheral resistance, retroactive to the left ventricle; in other words, it represents the sum total of pressure against the aortic valve. The pulse pressure represents the so called kinetic or driving power of the left ventricle, and amounts to the amount of force that the left ventricle, during the period of systole, must generate over and above the diastolic blood pressure, for the purpose of advancing the current of blood throughout the vascular tree.

Under normal circumstances, in a given individual, the blood pressure complex in terms of systolic pressure, diastolic blood pressure, and pulse pressure bear definite relations to each other. For instance, in an individual thirty-five years old, a blood pressure of 130 systolic, 85 diastolic, would leave a pulse pressure of 45 mm. of mercury. Such a complex, from the standpoint of relations, is considered normal. At a glance, one is impressed with the fact that the pulse pressure is essentially 50 per cent. of the diastolic pressure. It is the abnormal complex in our blood pressure studies, so far as the relations in the complex are concerned, that are of clinical significance to the clinician. For instance, an increase in the pulse pressure would signify an increase in the efficient work of the heart and vice versa; while an increase in the diastolic blood pressure would indicate an increase in peripheral resistance so long as the aortic valve is intact. If the aortic valve yields, then the diastolic blood pressure is increased at the expense of the declining pulse

pressure; on the other hand, if the diastolic blood pressure is maintained and the systolic blood pressure approaches the diastolic pressure, such a complex always implies myocardial distress and gradual loss of tone. A marked change in the blood pressure complex, as well as the pulse rate, incident to the change of position from that of the erect to the recumbent position, implies poor cardiovascular adjustment and can usually be attributed to a liable vasomotor system.

DR. A. L. SKOOG: A number of these cases will probably be discussed much in detail and some interesting points brought out. There were two or three cases with intracranial complications in particular which interested me. The man who had a stroke during the termination of a strenuous campaign I believe suffered from anemia of the brain, especially in certain regions. The vasomotor system may have been at fault very largely. It is rather curious perhaps that the vasomotor system is dependent upon the sympathetic nervous system. It is a more difficult system to study and we know less about it than we do about the spinal nervous system. I heartily agree with the doctor about some of the facts brought out relative to apoplexy and brain anemia.

DR. THEODORE H. ASCHMAN: This question of blood pressure is very important. In obstetrics perhaps we take blood pressures more often than the other specialties.

I want to speak about it in post-partum shock. I have had patients who within thirty minutes after delivery have gone into shock, not due to intra-uterine hemorrhage or lacerations of the cervix or perineum. The pulse would become very rapid and thready. Ruling out the exhaustion of a hard and difficult labor, we find that these cases have been greatly benefited by applying a very firm, tight abdominal binder for the purpose of bringing back the intra-abdominal pressure to what it was before delivery. Apparently the larger abdominal vessels and organs have become congested and the condition exists which we call hemorrhage into the larger vessels. An abdominal binder is a good thing to use. Some feel this is an old foggy idea but it certainly gives results.

DR. P. H. OWENS: Dr. Krall referred to the group of cases we see occasionally in which we certainly have a wide variety of blood pressure readings. I refer to the group that we saw following the Great War, especially among the soldiers who were classified as the asthenic type. There may be some pathological basis for these cardiac disturbances but many, I think, were purely psychic in their origin.

Under different circumstances an individual would give a variety of blood pressure readings. The worst thing we could do for some of these individuals was to tell them that one could feel their kidney or that their colon was down. If one would tell them that they would complain of it. I would like to hear Dr. Krall say something about this group of cases.

DR. J. M. SINGLETON: I would like to ask Dr. Krall a question about what he thinks of low blood pressure in pregnancy—pregnancy with low pulse pressure and low blood pressure. I had an interesting case recently, a patient about seven and one-half months, who had a blood pressure of 95 systolic and from 80 to 85 diastolic, pulse 120 to 150. We tried to get her to come to the hospital at that time. Finally, just a few days before delivery she came. She quieted down and her pulse slowed down. Her blood pressure was higher when she sat up and lower when she lay down; her pulse was more rapid when lying down than when standing up. She seems now in good shape. Her pulse has slowed down.

DR. A. C. GRIFFITH: The internist has a great

many problems and I think this of blood pressure is one that the laity seem to know so much about that we have to do a lot of explaining, but some of the things brought out tonight illuminate the subject.

Speaking of bleeding individuals, I recall one case, a man fifty-five or sixty years of age, heavy-set, whose blood pressure was around 240 to 250 systolic and 110 diastolic. Every so often, about Christmas time, he would come into the hospital to be bled. He would be dizzy and feel a little full. We would bleed him and take off probably a pint of blood. He would be in the hospital for two or three days, and about June come back and we would repeat the process. He lived several years this way. One year we missed his coming in and about two months later I was called out to see him. He had had a stroke of apoplexy and was paralyzed on his right side. After bleedings his blood pressure would drop down around 190 to 200 systolic and 95 to 100 diastolic. When I took his blood pressure after cerebral apoplexy it had dropped to 150 systolic and 90 diastolic. His paralysis cleared up and he went to California and lived four or five years and got along without any further bleeding. What it was in California that helped his blood pressure I do not know, but when he returned to this part of the country he still had some effects of his paralysis, but not much. He died out there from pneumonic infection.

I also knew another man with a blood pressure around 260 systolic and 95 diastolic. The question was whether to bleed him or not, but we decided not to bleed him. However, some of his friends told him the thing to do was to be bled. We discharged him and another physician bled him and right after bleeding he developed apoplexy and had paralysis.

DR. PAUL F. STOOKEY: I feel that the diagnosis of neurocirculatory asthenia in the lymphatic type of individual, that Dr. Krall characterizes as an individual with an unfortunate type of architecture, is to be made with an extreme degree of caution. Among the so called cardiac neurosis that developed in military service during the late war, at the five year period, a large percentage of these cases have developed aortitis, myocardial deterioration, pulmonary tuberculosis and hyperthyroidism.

Meeting of December 11, 1925

SARCOMA OF THE PENIS.—By DR. ERNEST G. MARK.

Sarcoma of the penis is an exceptionally rare tumor. Joelson,¹ who reviewed the literature most thoroughly, found only thirty-five cases of sarcoma and endothelioma. Nine of these reviewed cases belonged to the latter group and two of these may be definitely questioned as to histologic confirmation of the growth. A third case, classified as a fibrocellular tumor, reported by Hutchinson, in 1854, is open to serious question. Eight cases are reported as melanosarcomata and seven as belonging to the round cell type. Nine are classified as mixed or spindle cell sarcomata with a relatively low degree of malignancy. The case reported by Joelson was a fibrosarcoma of two years duration which showed no evidence of metastasis eight months after radical operation.

Of the thirty-six cases collected by Joelson (inclusive of the case reported by this writer) but eight were below the age of thirty-five years, i. e., the sarcomatous period. The larger number by far were over fifty years of age.

1. Joelson, James J.: Primary Sarcoma of the Penis; Report of a case with a review of the literature. Surg., Gynec. & Obstet. 38:150. 1924.

The following case report is submitted as an addendum to the collected series of Joelson, to whose article the reader is referred for complete bibliography.

A white barber, American, thirty-one years of age, married, was admitted to the Research Hospital June 29, 1925, for confirmation of a previous clinical diagnosis of sarcoma of the penis made by his attending physician, Dr. Samuel J. T. Davis, whom he first consulted on May 12, 1925. During the month of April, 1925, he noticed some slight pain on erection and upon examining himself detected a small body about the size of a small pea posterior to the coronal sulcus on the right side. This was not mobile, was not adherent to the skin, and apparently sprung from the cavernous body or the fascia at the point described. It was not painful to touch. It grew rapidly and within the next month the inguinal glands were markedly involved. A clinical diagnosis of sarcoma was made and on June 7 radium treatments were instituted by Dr. R. L. Sutton. The glandular involvement rapidly subsided but the original growth continued to increase in size and became ulcerated under a phimotic prepuce.

At the time of presenting himself at the hospital the following physical findings were noted: Temperature on admission 99.2; pulse 100. Height 6 feet 4 inches; normal weight 180 pounds; present weight 135 pounds. Nutrition poor, teeth good. Tonsils atrophied; breath bad. No palpable glands. Eyes normal to light and accommodation.

Chest. Lungs normal, expansion good. In posterior lower quadrant of right lung area tactile fremitus is increased with impaired resonance and indistinct breath sounds. Heart dullness within normal; no murmurs.

Abdomen. Musculature fair. There is marked extension of liver dullness. No masses are to be felt but the liver area is markedly tender.

Rectal. Sphincter normal; prostate not enlarged, nuch present; vesicles palpable but soft.

Genitalia. Scrotum and scrotal contents normal, slight discrete inguinal adenopathy. There is a hard irregular nodule extending from the coronal sulcus on the right, posteriorly on the corpus cavernosum. This growth is approximately 3 cm. in width by 5 cm. in length. The mucosa of the prepuce, and the underlying tissue over the area of growth, are markedly involved. The mucous surface is ulcerated.

Three skin growths at a distance from this lesion are observed, one on the inner surface of the right leg three inches above the knee, a second about the same distance above the left ankle, inner surface, and a third smaller growth on the left arm about two inches below the cubital fossa. These areas are nodular, fairly regular, nonpigmented and not ulcerated.

History. Venereal disease is denied. The patient states there is a history of familial "skin irritation" but there is no malignancy reported except that of sarcoma occurring in a first cousin. The growth in this instance started as a nodule on the right cheek. Death of this patient followed in six months from an extension of the tumor into the throat and from metastatic involvement.

About one year previous to the appearance of the penile growth the patient was injured in a gas explosion, following which he had numerous warts appear on his arms and back. These growths showed no tendency to ulceration or extension. The patient makes the statement, which is borne out by his physician, that shortly after the first appearance of the tumor of the penis, these growths began to disappear rapidly. At the time of our examination there were no evidences of warty growths to be found any place on the skin.

Radiological report. Examination of a negative of the chest shows it of the elongated type with good expansion, development and aeration. There is an increased density over the left apex as compared to the right and thickening along the perivascular structures in both upper lung fields with some bending along the linear markings and with characteristic snow-flake appearance. There is an enlargement of the peribronchial glands with some increase in the interstitial tissues in both lower lung fields, accompanied by some dilatation of the bronchi in the lower right that gives the impression of a bronchiectatic affair. The liver and gallbladder shows a small opaque area that lies on a line with the outer edge of the transverse processes and midway between the first and second processes. This opaque shadow may be a calculus. The liver is apparently enlarged; the lower border extends downward to about an inch above the crest of the ilium and to the left more than normal.

On the day following admission, under gas anesthesia, a section of the growth on the penis was removed. At the same time the skin nodule on the right knee was excised. The report follows:

Patient's No. 47,241. Laboratory No. 504. Clinical Diagnosis: Tissue from penis and skin of leg, probably sarcomatous.

Laboratory report. Microscopically, sections from penis show two pictures: the sections from the superficial part of growth show thrombosis of blood vessels, pyknosis and karyorrhexis, and dense polynuclear cell infiltration.

Sections from the deeper portion of the growth show round celled growth, the blood vessels of which are thick walled. In the larger blood vessels the wall is invaded by round cells. At the periphery of these sections there is fat, which is invaded by the growth.

Sections from the leg show growth of small round cells. The growth has thin walled blood vessels. In none of the sections is there a definite arrangement of the cells.

Diagnosis. Small round cell sarcoma.

The patient left the hospital on July 2, 1925. We deemed it hopeless to resort to radical excision in view of the many and rapid metastases. He died on November 30, 1925. His physician was unable to obtain an autopsy but states that at the time of his death there were several abdominal masses to be felt and that a few weeks before death chest examination showed marked lung involvement. The lesion above the left ankle had grown enormously in size and had broken down, exhibiting extensive ulceration.

DISCUSSION

DR. SAMUEL J. T. DAVIS: I have not very much to add to what Dr. Mark has said. About a year before this man came to me with these tumors he was in an explosion. An ammonia tank exploded and he was thrown into the street. I merely mention this because trauma has been given as a predisposing cause of sarcoma.

At that time he did not sustain an injury to the penis, to my knowledge. He sustained injuries to the body and his eyes were severely burned.

An interesting feature of the case was the fact that he had had, for a number of years, numerous warts on his hands and arms. After the sarcomas developed these warts began to disappear and I believe entirely disappeared. Their disappearance was so marked and rapid that the patient called our attention to it. He said, "A month ago they were three times as big as they are now, and now they are almost gone." I do not know their relationship to sarcoma, if any. They are supposed to have some

relationship to melanotic sarcoma, but these were not of that type.

This man was nearly a skeleton when he died, but the constitutional symptoms were not in proportion to what one would expect. He apparently felt well and smoked cigars almost continuously.

The penis was completely destroyed, with no metastasis to the testicles. There was a large ulcerating sarcoma on the left ankle and numerous sarcomas on the legs and other parts of the body.

Fortunately there was no difficulty with micturition. At one time it seemed it would be necessary to catheterize him, which would have been practically impossible as there was only a mass of necrotic tissue where the penis formerly had been.

The immediate cause of death was metastasis to the lungs, to which he shortly succumbed.

ON SOME MENTAL MECHANISM AND LAWS OF LEARNING.—By DR. G. LEONARD HARRINGTON.

The mechanism by which an organism reacts as a whole to the environment is the mind. The "grown-up" mind accepts reality as it is and adjusts itself accordingly. A less well developed mind may divide itself when meeting a difficult situation.

A young woman who had since childhood felt a strong attraction for certain girl schoolmates and for certain female teachers now, as a teacher, feels a strong pull on her emotional self by certain of her girl pupils. She will not satisfy this hunger. Some months back, while walking outside, she fell into a sleep from which she could not be aroused and in which she called for the pupil for whom she had felt the attraction. When others came near her she pushed them away, but when this girl came near she loved her almost desperately. When she "came to" she did not remember this experience. This kind of behavior occurred a number of times. The sleep periods varied from sixteen to forty-eight hours in duration. She had never thought there might be a connection between her love feelings and the behavior in her sleep. A great relief was experienced when the relationship was realized.

Psychologists have observed animals that are in a state (1) of readiness, (if hungry are ready to eat); (2) will exercise (try this or that means to get the food); (3) with a resultant satisfaction if successful. This exercising with satisfaction is a fundamental law of learning. The product of this process of learning is habit. Since we are what our habits are, it is very important that children so exercise with satisfaction that proper habits, interests, attitudes, and appreciations be developed so that life may be met without unhealthy splitting of the mind.

DISCUSSION

DR. A. L. SKOOG: A summary of Dr. Harrington's talk of course embraces quite a large field and possibly several topics. Many of them are very interesting, indicating the value of education. Some of the modern minds utilize perhaps means which are largely developed along psychological lines. To me it is rather interesting to watch the methods of education in our primary schools, and developments from one decade to another. There are, no doubt, some radical changes that have been made. We have every reason to believe that more radical changes are to come in the next decade. Yet many of the things being taught now later will be considered experimental and changed or eliminated at some later date.

Dr. Harrington, in an interesting part of his discussion, brought up the subject of dreams. I have given a little thought to dreams, both from the

standpoint of reading and also from some cases which I have observed. I think Dr. Harrington only mentioned pathological dreams. Dreams might be classified into physiological and pathological. However, I am not going to tell you where the dividing line should be because I cannot.

We all know that various individuals may dream at times, some more than others. Personally, I believe that dreams can occur only in an individual whose sleep or state of unconsciousness is quite shallow. Dreams in states of deep sleep are probably impossible, or at least if they could exist they cannot be related at some later period, nor will there be evidence of them in speech. Some dreams are related by the individual after he wakes. Some are recorded in his sleep. In other words, he talks in his sleep. Every individual who talks in his sleep has a dream.

Dreams are not confined to human beings. I think I have observed them in animals. I might mention the work of von Bechterew for some years before the World War, who had a magnificent laboratory for comparative psychological experimentation. When I was in St. Petersburg I had the opportunity of visiting his laboratory and observing a little of the work he was doing there. His researches were carried out with dogs, monkeys, cats, and several other animals. I recall one dog that was in the habit of sleeping under my desk while working, and on a number of occasions I observed what I thought were dreams. Apparently from the sound the dog was chasing rabbits, and there was not only the characteristic bark but also movements of the four extremities. These dreams I would classify as probably physiological. At least they were not painful.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

ONE HUNDRED AND NINETEENTH MEETING, MARCH 8, 1926

1. PRESENTATION OF CASES.

A. A CASE OF IDIOPATHIC CARDIOSPASM.—By DR. JOSEPH W. LARIMORE.

The following case of idiopathic cardiospasm is presented more because of the infrequency of this condition than because of any unusual features in this case which is, however, particularly notable for its long duration.

The patient is a white male, aged 50 years, married, and occupied as a manager of an express company in which he is also one of the chief workers. He has noted dysphagia since childhood, but until 25 years of age there was not sufficient disturbance to greatly annoy him. Then he noticed he could not eat a banana. This would return some fifteen minutes after swallowing and would be accompanied by a large amount of mucus. From that time he has experienced at meals a sudden dysphagia and would have to discontinue eating. This has continued since in variable degree, but always preventing the taking of a varied, full meal. The patient speaks rather dramatically of the many holiday meals which he purchased and had prepared and at which he could only have the satisfaction of seeing the family eat. There have been occasions when he could regurgitate about a pint and a half of mucus, and could usually with effort bring up considerable mucus. He has practiced emptying the esophagus before retiring. His diet has been almost confined to milk, butter-milk, soft eggs, bread and butter, and bread and

milk, gravies, and soups. He does masticate meat, fruits and other solid foods for their juices but expectorates the pulp. He complains that he has never been able to eat away from home because of these enforced habits. There has been no pain with deglutition. Food could not be washed down after the onset of spasm. In spite of these nutritional handicaps he has been able to maintain a fair weight and to continue a very active and laborious existence. Ten years ago bouginage was attempted by a physician but without X-ray control and was unsuccessful. Recent X-ray examination showed a markedly delayed constriction at the cardiac orifice of the esophagus without alteration of the contour in any way suggestive of organic lesion. The esophagus was moderately dilated in its entire length, and exhibited some folds which suggest an increase of its total length. A variability occurs in the act of deglutition, with intermittent increased patency alternating with greater spasm at the cardia.

Dilatation was accomplished by an air-pressure dilator under fluoroscopic control and since that time the patient has had no dysphagia and has been able to eat all foods, which he relates with great pleasure. He has gained ten pounds in eighteen days.

The cardiospasm-dilator used was built by myself about a large stomach tube by putting a formed silk bag between two rubber bags at the distal end. The silk bag is made with a constriction in the center. This allows the dilator to engage the cardia. It allows for dilatation to a diameter of 2 cm. and regardless of pressure this cannot be increased without bursting the instrument. A bougie tip attached to the lower end of the dilator facilitates engaging and passing the cardia, which may be more resistant to the blunt end of the stomach tube. Lead foil is put around the tube inside the dilator to facilitate the fluoroscopic control of its position. When the esophageal sack is so great that support is not given to the dilator tube, the dilator may be built upon a semi-rigid bougie.

B. DEMONSTRATION OF A NEW TYPE OF SYRINGE FOR MAKING INTRAVENOUS INJECTION.—By DR. WARREN H. COLE.

A syringe has been devised by us to add to the simplicity of intravenous injection, especially the injection of tetraiodophenolphthalein. It consists of a small frame holding two syringes which are connected with a two-way valve. The needle fits on the outlet of the valve and by filling one syringe with physiological saline, the other with the substance to be injected, the contents of either syringe can be injected by turning the stop cock of the valve. The needle is inserted while connected with the syringe filled with saline, and the possibility of extravascular extravasation eliminated by injecting some physiological saline first. After the dye is injected, the vein is washed out with saline before withdrawal of the needle, and the possibility of venous thrombosis is practically eliminated. The practice of withdrawal and injection of a small amount of blood several times also tends to eliminate thrombosis.

2. RELATION OF VITAMINS TO NORMAL DEVELOPMENT AND CANCER.

—By DRs. MONTROSE T. BURROWS AND LOUIS H. JORSTAD.

Our studies of cancer have not shown the cancer cell to be an embryonal type of cell, as Cohnheim had thought it might be. There is no evidence that it arises in the large number of instances from such

cells. It is a cell reacting under much more primitive conditions. It is any cell of the body released from those general conditions active in the organism which force all cells in the normal organism to react for the good of the whole. The cancer cell is a cell freed from those conditions. It resembles the bacterial cell. The active substance which forces a colonial existence on the cells of the body is vitamin A. The cells of the body continue to remain active in the presence of vitamin A only so long as they obtain vitamin B from other sources in nature. Vitamin B is their life's energy. They can form it, but not in quantities sufficient to overcome the inhibiting action of vitamin A in the normal organism. When freed from the action of vitamin A they can form ample vitamin B for growth. They thus become independently growing systems. These same conditions prevail in a culture of bacteria.

Cancer deals therefore, not with embryological processes as Cohnheim conceived it, but with those much more general evolutionary forces which had to do with the production of metazoan life in the universe. Such forms came into existence only when an excess of vitamins A and B had become present in the universe. The vitamin A value of the organism is very high in the egg and early divisions of the eggs. This value drops in the chick embryo to a low point at about the 4th or 5th day of incubation. It then rises again. It is not surprising, therefore, that the cells of the chick embryo at this period resemble cancer cells. Cancer results from any locally acting substances which either remove the A and increase the B excessively in a small area of tissue. It is a local vitamin imbalance. Its cure can be fully predicted from these studies and will result from anything destroying the cancerous tissues or anything acting to reestablish the proper vitamin balance in this tissue. Spontaneous cure of cancer is known to take place by the latter method which is the one to be preferred. The problem confronting us is the means to reestablish these balances without disturbing the balance of these vitamins in the remainder of the organism.

3. DIAGNOSIS OF CHOLECYSTITIS BY CHOLECYSTOGRAPHY.—By DR. OSCAR C. ZINK.

Prior to the advent of gallbladder visualization by the Graham-Copher-Cole method, the roentgenologic evidence of cholecystic disease was very scant and consisted chiefly in the visualization of gallstones having sufficient calcium to be opaque. In lesions of the gallbladder without demonstrable stones, the X-ray film can only exceptionally furnish decisive evidence.

Occasionally gallbladder shadows are seen due to the intrinsic density of their walls or the viscosity of their contents. Otherwise the roentgen manifestations alone are insufficient to support a diagnosis. Indirect signs are at times helpful, but Mills remarked that gallbladder "secondaries" occur so seldom when actual gallbladder disease is present, that when they do occur their value is questionable.

The diagnosis then of patients presenting themselves with gastric symptoms was a matter of exclusion. Carman has demonstrated gallbladder shadows in cholecystectomized patients. Caldwell says: "If we only make enough films and make them well enough, we can obtain suspicious shadows in the gallbladder region. The interpretation of gallstone films becomes a matter involving not only skill and judgment but temperament as well." The personal equation of the observer is most important. This, I believe, is the best explanation of why some

observers report as high as eighty-five per cent. and others as low as five per cent. positive findings in these examinations. The easiest thing to do is to read into the films something which is not there. The clinical indications of gallstones are fairly accurate, and stones are present in fifty to sixty per cent. of the cases. About one-tenth will give reliable stone shadows, and in the other nine-tenths some of the films may show hazy, suspicious shadows. If we make a positive diagnosis of gallstones on these shadows, the operation will vindicate us in the majority of cases and thereby cause us to overestimate the help actually derived from the X-ray films. Clinical knowledge of the patient often leads us to accept these shadows, which might be found in the films of a normal patient, as evidence of gallstones. Dr. Moore has shown you how these errors are eliminated by the use of cholecystography.

Clinical diagnosis is never simple in a sense that there is a definite symptomatology, but each case presents a new, differential problem. The term "right upper quadrant" disease covers a large number of possibilities, including chiefly gastric or duodenal ulcer, appendicitis with referred pain, spinal lesions, etc.

Cholecystitis can be divided clinically into four groups:

1. Cases in which attacks of biliary colic are the predominant feature, with apparently healthy interim periods.

2. Cases in which stomach symptoms predominate, and the gallbladder symptoms are of minor importance.

3. Cases in which the stomach and gallbladder symptoms play an equal part.

4. Cases in which there is a general gastric indispotion over a period of years, and the gallbladder is silent.

The last group is the important one to recognize if we expect to make an early diagnosis of gallbladder disease.

In cholecystography we have a direct method which furnishes diagnostic evidence in the chronic but vaguely dyspeptic individuals. An opportunity is also afforded for localization of tender points. The diagnosis of pericholecystitis is no longer a pre-operative impossibility, as I will show later in some slides. Hour-glass contractures, adhesions with dislocation of the fundus fall into this group.

The associated hepatitis in gallbladder disease is a distressing feature to be combated and probably accounts for the post-operative symptomatology so often seen. Non-surgical drainage should be resorted to early and continued until the liver infection subsides.

We have performed cholecystography on 185 patients at St. Luke's Hospital. The intravenous method was used in 165, and the oral in 20 cases. Of the 50 cases that came to operation, 44 gall-bladders were removed and 44 (or 100%) were considered normal and not removed.

WOMEN'S AUXILIARY

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Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.

Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.

Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.

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Vernon County Auxiliary

The Women's Auxiliary to the Vernon-Cedar County Medical Association, attended The Chamber of Commerce luncheon given at the Centenary Church, April 8, at which were present the members of the Medical Association, and a very representative body of Nevada citizens. Addresses were given by Dr. North, of St. Louis, J. R. Davis, President of the Chamber of Commerce, and Mr. Lee B. Ewing, which were instructive and enjoyed by all present.

Following the luncheon the Auxiliary held a business meeting in the parlors of the church.

Meeting was called to order by the President, Mrs. J. M. Yates.

Mrs. C. C. Earp rendered an organ prelude, after which Dr. North and Dr. Frank Ridge addressed the ladies on subjects of sanitation and legislation with regard to public health. These doctors told the ladies how they could be of help to the Medical Association by bringing about legislation to govern conditions in the handling of food and in securing the appointment of a county health officer to devote his whole time to public health solution.

Six names were added to our membership list and a feeling of cooperation was manifested. Mrs. T. B. M. Craig reported that she had placed a copy of *Hygeia* in all the schools of Nevada, including the negro school.

Jackson County Auxiliary

On March 12, 1926, a meeting was held at the home of Mrs. C. C. Conover. A short business meeting preceded a talk by Doctor Lane of the Department of Biology of the University of Kansas on "Problems of Heredity" and Mr. Adams from the local Chamber of Commerce on "Physical Education." The program was followed by a delightful tea. There were about ninety present.

On April 9, 1926, a benefit bridge party was given by the Auxiliary at the Hotel Brookside. One hundred and six tables were sold. After paying expenses \$424.00 were left. Mrs. H. C. Berger was chairman. The purpose of this benefit was to aid in the physical education program for the children of the state of Missouri and for state public health work.

The program of the State Meeting of the Women's Auxiliary in Saint Louis, May 18 and 19, may well inspire every Auxiliary member with the earnest desire to be present at every session. Please notice the delightful entertainment planned for all visiting ladies the first day of the meeting. Make your plans to arrive in time for this event.

As indicated, the headquarters of the Auxiliary will be at the Coronado Hotel. The management of

this hotel is providing amply and conveniently for all meetings. The State Medical Association through its Secretary, Dr. E. J. Goodwin, is providing the secretarial equipment for enrollment and performing other important services for the meeting.

County Auxiliaries are expected to send one delegate for membership of twenty-five or less, and one additional delegate for each additional twenty-five members. Presidents of county auxiliaries are ex-officio delegates. If you are a delegate, by all means come to St. Louis. If you are not a delegate, you will also be very welcome. If you are not a member of any auxiliary come and get the vision and inspiration of this meeting, both from the informing and interesting addresses and from the reports that will be made in the general auxiliary meeting. The program will be found on another page of this issue.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Breckenridge, at two o'clock, March 25. Members present were: Drs. G. S. Dowell, Tinsley Brown, H. H. Patterson, C. H. Wilbur, B. F. Carr, L. M. Daley, J. E. Gartside and Mrs. E. B. Thompson. The visitors were: Drs. Ralph W. Holbrook and Clyde O. Donaldson, both of Kansas City.

The minutes of the meeting held at Hamilton, November 12, 1925, were read and approved. Dr. Tinsley Brown, who has always been a constant member of the county society during its existence, who has completed fifty years' practice at Hamilton, and who has been a member of the State Association for forty-six years and of the American Medical Association for forty years, was by unanimous vote elected an Honor Member, according to Chapter XII, Section 6, of the Constitution and By-Laws of the Missouri State Medical Association. He was also recommended as an Affiliated Member of the Missouri and American Medical Associations.

The visiting doctors were voted the privileges of the society. Dr. Donaldson read a paper on "The X-Ray and Radium Treatment of Uterine Cancer." The paper was well received and discussed. Dr. Holbrook examined a clinical case of incipient pulmonary tuberculosis which gave a history of frequent hemorrhages but no rise of temperature. It was considered a good case for admission into the State Sanitarium at Mt. Vernon.

The society adjourned, to meet in Braymer at the regular meeting time in April.

TINSLEY BROWN, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

Schuyler County Medical Society met at the office of Dr. J. B. Bridges, Downing, March 23. The meeting was called to order by Dr. A. J. Drake, President.

Those members present were: Drs. J. B. Bridges, A. J. Drake, H. E. Gerwig, J. H. Keller.

The minutes of the last meeting were read and approved. No papers were read at this meeting but a number of cases were reported and subjects discussed for the good of the society.

The following officers were elected to serve for the ensuing year: President, J. H. Keller, Lancaster; vice president, H. E. Gerwig, Downing (re-elected); secretary treasurer, J. B. Bridges, Downing (re-elected); delegate to State Association meeting, A. J. Drake, Lancaster; alternate, H. E. Gerwig, Downing (re-elected).

J. B. BRIDGES, M.D., Secretary.

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PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } C. B. FRANCISCO, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

RESPONSIBILITY OF ORGANIZED MEDICINE TO THE PUBLIC*

PRESIDENT'S ADDRESS

EMMETT P. NORTH, M.D.
ST. LOUIS

In accepting the position of president of the Missouri State Medical Association at Kansas City last year I fully realized the responsibility that the office carried. We are facing an economic crisis in medicine in which all advanced thinkers are sounding their tocsins, some stating that the standards are not too high, others that we should strike a happy medium without lowering the efficiency of the grade of teaching by devoting more time to the clinical side rather than giving predominance to the laboratory and research branches. This is a matter which I believe will be worked out to our satisfaction by the Council on Medical Education of our parent body. Steps are already under way to adapt the teaching hours so as to shorten the curriculum at our leading universities.

The cry of the legislator that we are keeping the poor boy out of medicine is the result of the crusade of non-reputable medical colleges and certain cults. The truth remains that the earnest student at no time has stood a better chance than at the present. The preliminary requirements should be of such a standard that the student should be able easily to grasp the subjects. The study of medicine is a mental marathon which is a survival of the fittest, and the candidates for graduation who fail to apply themselves are thrown into the discard. The degree of doctor of medicine will mean more to the coming generation than it has to those of the past, owing to the enforced elimination of the non-reputable medical schools. This has been brought about by the Council on Medical Education of the American Medical Association in conjunction with the boards of health of the entire United States, backed by public

opinion. The awakening in Connecticut a few years ago caused an upheaval in the department of medical licensure in all the state boards. The Council on Medical Education is deserving of great credit for calling attention to the fact that Connecticut offered a haven to the graduates of the low grade medical schools. This came about by their compilations of licensure departments of various states and bringing these to the attention of the authorities of that state—Connecticut. Fortunately, other states followed in quick succession and it was not long until it was found that every state in the Union had been victimized.

Dr. F. C. Waite, of the Western Reserve University School of Medicine, of Cleveland, Ohio, was invited to come into Missouri after the passage by the legislature of the 1921 Act which removed the necessity for attending a reputable medical school. He was to make a survey of licensure and medical schools. Unfortunately he was so occupied that it was impossible for him to accept at that time. However, after the Connecticut situation developed he saw the critical condition existing in Missouri, within whose borders three of the non-reputable schools were located. In 1923 he consented to come to Missouri and made one of the most comprehensive surveys ever made on medical schools and the department of licensure. Missouri owes an everlasting debt of gratitude to this great man who gave up his time and money to come in and help this state out of the medical mire. The governor of Connecticut deserves great credit for his efforts in ridding that state of the medical charlatans.

LEGISLATION

Missouri is face to face with one of the weakest medical practice acts of any state of the Union. The public health officials have had to deal with problems that seemed insurmountable. They had to build up cases on which legal advisors gave the opinion that they "didn't have a leg to stand on." But with that hazard cases have been made that have stood the test of all the courts. The Briggs case has run a favorable gauntlet in the circuit court and the Hurwitz case, of Joplin, Missouri, has stood the

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, Mo., May 17-20, 1926.

test of all courts, including the Supreme Court of the United States, thus establishing a precedent which other offenders will have a hard time to evade.

This Association with the cooperation of the attorney-general's office and the able assistance of Assistant Attorney-General Caruthers have proceeded with the task of the enforced forfeiture of the charters of non-reputable schools within our confines, Missouri having three of the entire six in the United States. A special commissioner has rendered an opinion to the Supreme Court advising the revocation of two of their charters, the third school being a hybrid Osteopathic-Eclectic school in which no charge of selling diplomas was established. Thus you can see that we have attempted to get at the fountain head, leaving the other offenders to the future, and it is earnestly desired that the members of this Association lend all possible aid and assistance to the state board of health in their efforts to rid the profession of the undesirables.

Membership in the Missouri State Medical Association is an assurance to the public that one is a qualified physician and that he will discharge his obligation to the people honestly and courageously. Every member should take pride in his affiliation with this organization and give his loyal support to every worthy undertaking sponsored by the Association. The Missouri State Medical Association is also a dominant influence in directing every movement looking to the improvement of health conditions and the advancement of the science of medicine in the state of Missouri. This membership means reputability in the eyes of the public.

The state board of health has its function in licensing those who prove qualified to pass the examinations, but the responsibility of the medical profession is to report to that body irregular conditions that might arise, and also to back up that body with every force that they can command when that board acts in accordance with the provision of law under which they are created. It is perhaps unfortunate that the present board of health after all legal obstacles have been removed has not publicly shown an inclination to go forward with the prosecution of an individual already charged not only with obtaining his license fraudulently, but by casting reflections upon a former board by obtaining money for supposed influence that he had in getting unworthy candidates for licensure before that board. It is to be earnestly hoped that this policy of inactivity will be replaced by militant prosecution of all offenders against the medical practice act, whatever their station or influence, to the end that the State of Missouri will be relieved of the unjust criticism under which it is now laboring.

It is openly charged that there are over 200 physicians practicing medicine in Kansas City without a license. A survey of all of those practicing the healing art has been made of the entire state which should be an invaluable aid, and if we can enforce annual registration we will have a weapon that will be of assistance in checking up the irregularities. St. Louis has a militant health commissioner who has made it very difficult and dangerous for the illegal practitioners to ply their wares. Dr. Max C. Starkloff, the dean of the health officers of the United States, has had an enviable record. It is to be earnestly desired that public health officials should be divorced from politics and his thirty years service of efficient work is the best argument that can be offered.

Arthur M. Hyde was the first governor of the State of Missouri to establish a bipartisan eleemosynary and health board. This policy should establish a precedent hard to overcome. The policy of dealing with the cults is one in which our legislative committee should lend thoughtful attention. We have no fight to make on anyone practicing the healing art other than they practice knowingly. Let them have the proper preliminary or premedical training, also the fundamentals in medicine and let the therapeutic angle be of their own choice. I am sure that the intelligent minds of all branches of those practicing the healing art, backed by solid public opinion, can solve the problem by uniting on a medical practice act which will have teeth. The time is ripe for such action by the next legislature for never has public opinion been so aroused as at the present time. Your officers have traveled throughout the state holding councilor district meetings and in addition to the scientific programs have appeared before Chambers of Commerce, the Rotary and Kiwanis clubs and other civic bodies. The reception has been most pleasant. Their enthusiastic cooperation has been promised and I am sure this influence will show itself at the proper time.

MEDICAL COLLEGES

Missouri is particularly fortunate in having within its borders two reputable schools that are rated very high by the Council on Medical Education of the American Medical Association. However there is no question of the need of more reputable medical schools in this state. Each year there are constant appeals from students to be allowed to matriculate in these medical schools and the students finishing the two years course at the State University at Columbia are faced with the difficult problem of getting into a school to finish their junior and senior years. Our schools have only been able to admit three or four of such type hence the

remainder of the men from the University of Missouri have to enter other schools in remote sections of the country. The Lincoln and Lee University at Kansas City, which is now in process of organization, intends to have a medical department. This university, sponsored by the Methodist Church, will do a great deal to help in this situation. The endowment promises to be large enough to assure its success and reputability. Kansas City physicians have shown more aggressiveness in their ability to advertise their city medically than any other group of physicians in the state, and with their number of excellently trained men they should have no trouble in giving Missouri a medical school sufficient to take care of all the requirements that go to make up a reputable school.

The crying need of the rural communities for more doctors has been discussed every year. The location of community health centers throughout the state and the state highways under construction will help to relieve that situation. We are all creatures of environment and as a rule after attending medical school for a number of years in a large city, forming associations and acquaintanceship we find a very large percentage of our graduates located in such surroundings, preferring the convenience of large cities to the lack of facilities of smaller towns and rural communities.

The University of Missouri is now giving only two years in medicine but steps undoubtedly will be taken in the near future to get back to the four-year course which they were forced to abandon on account of dearth of clinical material. With the establishment of a state general hospital and the accessibility of Columbia through the medium of state highways we can see our dreams realized. This will aid economically to increase the number of reputable graduates and by environment direct them to smaller cities and rural communities.

ASSOCIATION OF CRIMINAL JUSTICE

The work of the Missouri Association for the Administration of Criminal Justice has aroused a nation wide interest in the effort to facilitate the trial and conviction of criminals. This work has been commented upon and singled out as the most progressive work of any other organization of like kind in the United States. Our Association has contributed by giving the time of its medical relations committee and all other expenses in which we were called upon to make to the Criminal Justice Association. The association found that in Missouri the criminal has about forty chances of escaping punishment to one of conviction, due to the many loop holes found in the criminal statutes and the administration of the law by the respective officials. Our Asso-

ciation has been particularly interested in this work in the activity of our committee on medical relations specifically attempting to find a reasonable and efficient method of expert testimony upon the status of criminals who plead insanity as a defense. Our committee made its report at Columbia last month and recommended the establishment of a commission under state control composed of the alienists in charge of our state hospitals who would be directed by the court to examine every person offering insanity as a defense against his criminal act as soon as that defense is offered. We believe this method of state control of the examiners of supposedly insane criminals would largely prevent the employment of so called experts to testify for and against the defendant whose evidence has made a farce of many trials and brought shame and humiliation upon our profession.

PERIODIC HEALTH EXAMINATIONS

The movement to encourage the apparently healthy to be examined at least once annually by their family physician is making steady progress in many states. The American Medical Association has published a manual of suggestions for the use of members undertaking to perform this service, and a conference on periodic health examinations was held at Chicago during the conference of state association secretaries, November 20 and 21, 1925. The manual published by the American Medical Association is offered to the members at cost price, with the imprint of the State Medical Association on each copy, and the suggestion is made that our Association purchase enough copies to supply one to each member. Twelve state associations have organized this service and have purchased copies for distribution to each of their members.

This is a service that I believe the Missouri State Medical Association should undertake and encourage the component societies to adopt this movement and make it one of their principal activities for the protection of the health of the people. You are aware of the activities of commercial bodies in this field of medical effort which emphasizes the importance of the movement being controlled by the organized medical profession.

DALLAS MEETING

The Dallas meeting was one of the most unusual as far as Missourians were concerned. There were over 4100 Fellows registered. The scientific program was of the highest order. The House of Delegates handled problems of vital importance to the profession, but the most gratifying to the Missouri profession was the unanimous election of Dr. Jabez N. Jackson, of

Kansas City, Missouri, as President-Elect of the American Medical Association.

If we emulate the practice of unselfish devotion to our calling set before us in the lives of the men who have served in the past we too will have achieved something worth while. This should be the aim of every member of the Missouri State Medical Association.

3511 Washington Boulevard.

DIFFERENTIAL DIAGNOSIS OF VARIOUS TYPES OF SPINAL CORD LESIONS*

ERNEST SACHS, M.D.

ST. LOUIS

Our goal, towards which we are all striving in every field of medicine, is to prevent disease. At the present time this seems highly improbable in many neurosurgical diseases, but one does not dare say impossible when such hitherto unsolvable problems as yellow fever, diabetes, and scarlet fever have been cleared up by Reed and Lazear, Banting and the Dicks. Until preventive medicine throws surgery into the discard and the surgeon becomes as extinct as the dodo, we must perfect our diagnostic methods so that we may recognize our cases early, before irreparable injury has been done to the nervous system.

In surgical diseases of the spinal cord this is much easier than in many cerebral lesions. The cases we are called upon to deal with may be grouped under three headings: New growths, or pathological processes that present the clinical picture of a new growth but are not tumors in the true sense of the word; spastic conditions without any signs of a localized lesion; and traumatic conditions. Whereas the localization of focal lesions of the brain requires frequently the use of numerous special methods, in spinal lesions a careful history and neurological examination in the vast majority of cases suffices to establish a diagnosis. The reason men fail in the diagnosis, or at least delay unduly in making the diagnosis, is because the standard textbooks rarely take up the early signs and symptoms of disease but discuss diseases when clearly established; and second, because in practically all medical schools neurology has been treated as a step-child and neurological surgery as an unborn step-child. I am not making too strong a statement when I say that the majority of physicians who graduated more than ten years ago believe that after a neurological diagnosis has been made you cannot do anything for your patient, and that surgery of the

nervous system has a mortality of about 100 per cent.—so why bother.

Spinal cord tumors have a very insidious onset. While pain is usually supposed to be an early sign, in an analysis of 132 laminectomies, of which 33 were for spinal tumor, only 4 had marked pain, whereas the disease in the others started insidiously with indefinite subjective sensations and paresthesias. These paresthesias constitute a most fascinating chapter in the study of focal spinal lesions. These paresthesias precede any objective demonstrable findings, often for months and sometimes for years. One patient, for example, for an entire year suffered fearful discomfort when water, irrespective of its temperature, touched her skin. At the end of a year she finally developed a pathological toe reflex and slight diminution of sensation on the opposite leg. I suspected a tumor in her case but it took weeks of repeated examinations before I was certain and then the level of the lesion could not be determined by the employment of the usual methods of pin, cotton-wool, and hot and cold test tubes. It was a fortunate accident that I tried a cake of ice and with this found the sensory level which could not be established in any other way.

A patient with a slow compression of the cord may develop five types of signs: 1. Paresthesias. 2. Partial or complete loss of some or all forms of sensation. 3. Motor weakness or paralysis. 4. Pathological reflexes. 5. Pain.

If the lesion is anywhere above the cauda equina the reflexes are increased and the patient presents the picture of a spastic paraplegia. If the lesion involves the cauda equina we have the picture of a peripheral nerve lesion, the reflexes may be diminished or lost and the patient has a flaccid type of paralysis. Occasionally when the cord has been very severely compressed the reflexes, which should be increased, are lost and this is a confusing picture, difficult of explanation and interpretation. Reflexes supplied by the cord segments at the level of the lesion may be lost, that is, we have a peripheral lesion, while the reflexes controlled by the cord below that level are pathologically increased to the point of clonus. This may be a valuable localizing sign, as in the case of a man who had a tumor at the level of his fifth cervical segment. His lower extremities showed extreme spasticity, all his arm reflexes were present and normal with the exception of his triceps reflex on one side, which was absent. His tumor involved the fifth cervical roots on that side causing loss of the triceps reflex and the pressure on the cord produced a spastic paraplegia in the lower extremities. The muscles supplied by the segments below the lesion, though spastic, are weak and voluntary control is affected. Sensation is lost or diminished in

*Read before the Utah State Medical Association, Salt Lake City, Sept. 9, 1925.

the skin segments innervated by the segments of the cord below the lesion. It often happens that the loss is not uniform as in a recent case where all forms of sensation were markedly diminished except in the fourth and fifth sacral skin segments which supply the genitals and the area immediately about the anus where sensation was normal.

Regarding pain. In the early years of spinal tumor surgery, pain was constantly emphasized. It was said no tumor diagnosis was justified unless pain was present. It was thought that extraspinal and intraspinal tumors were differentiated by the presence or absence of pain. Extraspinal tumors, it was thought, must have pain. Today we know this is not correct or necessary and pain no longer receives the attention it did a few years ago.

The recognition of a spinal lesion is easy; spastic paraplegia with the associated pathological reflexes is, in the vast majority of cases, due to a spinal lesion, but to determine the exact location of a lesion or its pathology may be extremely difficult and tax the resources of the neurological surgeon to the utmost. These two points, localization and pathology, are essential for a complete diagnosis. Let me say right here that I believe the surgeon who operates on the nervous system must be able to make his own diagnosis. Because the technical methods are so different and the neurological training so arduous, the time has passed when these cases should be handled by the general surgeon. We cannot always tell positively that a focal lesion of the cord is due to a tumor. Inflammations and some cases whose pathology we as yet do not understand may give exactly the same clinical picture. To help us out in this dilemma we have in the last year or two had the help of the Quackenstedt test described independently by Ayer, of Boston. Briefly, when there is an obstruction to the flow of subarachnoid fluid, the fluid in a water manometer connected with a needle inserted into the canal below the lesion, will not rise when the jugulars are compressed, which it does when there is no obstruction in the canal. Furthermore, the spinal fluid below the lesion may show pathological changes, being yellow, and coagulate promptly and show chemical changes, all of which normal spinal fluid does not do. There are those who put complete dependence on Ayer's test. This is wrong for it is possible to have a large spinal tumor with a negative Quackenstedt which at operation apparently has completely obliterated the subarachnoid space. Air injection of the spinal canal has been advocated by Dandy but in my experience it is of little if any value and rarely indicated. My rule for fifteen years has been, and still is, that

every spinal lesion that shows a focal level has not been given a fair chance unless it has been explored. I have no hesitation in advising this, furthermore, since in our hands laminectomy has been a very safe procedure. In 132 laminectomies our mortality has been 12 per cent. but 7 per cent. of these died from their disease and not from operation. (See accompanying table).

ANALYSIS OF 132 LAMINECTOMIES

Type of Case	Number of Cases	Deaths**
Tumors of cord and meninges.....	29	3
Tumors extradural	3	1*
Telangiectasis of cord (angiomas)....	4	0
Arachnoiditis and pachymeningitis....	17	0
Fractures	14	3*
Tuberculosis	3	1
Syphilis	1	0
Spinal sclerosis	3	1
Meningitis	11	6*
Negative findings with myelitic symptoms	19	0
Laminectomy with chordotomy.....	10	1
Posterior root sections.....	16	1
Laminectomy for foreign body.....	2	0
Totals	132	17

*10 died of their disease.

**Gross Mortality.....132 cases; 17 deaths; 12.7%

Mortality, excluding deaths due to disease.....122 cases; 7 deaths; 5.7%

The treatment of fractures and fracture dislocations of the spine constitute another interesting problem. Neurological surgeons are greatly divided as to the best treatment of this condition. One group believes in operating at once on all cases that show the picture of a complete transverse lesion and leaving those that show a partial lesion alone. Others operate only those with a partial block and leave the cases with complete block alone.

My own view has been this: A complete block is either due to severance of the cord or due to edema and hemorrhage. When the complete block exists the two conditions cannot be differentiated. Partial preservation of function means that the cord has not been completely severed and that the paralysis that exists is due to a partial severance or edema. Therefore I advocate operating the cases with complete block on the theory that early relief of cord compression where edema and hemorrhage are present enables the cord to recover. This was demonstrated experimentally by that noble neurologist and experimentalist, Reginald Allen, of Philadelphia, who, because he believed line officers were more important than medical officers, became a captain in the line and was killed leading his troops in a charge in the Argonne. Occasionally where very little function is retained I may explore these also, but as a rule I leave them alone and try to control the edema by the administration of hypertonic fluids.

This line of treatment will inevitably lead to operation on some hopeless cases but that cannot be avoided. Coleman, of Richmond, very recently has done Quackenstedt tests on all

cases of fractured spines and has found that some show a block and others do not. He suggests that this may be a way of differentiating these cases, namely, that the cases with complete paralysis and a spinal block may be helped by operation and the others should be left alone. This is to my way of thinking the most important contribution to the surgery of fractured spines that has been made in the past twenty years and it may enable us to do away with unnecessary exploratory laminectomies.

The third group of cases is the spastic paraplegias with no focal lesions. These are a discouraging group. There are four things that have been done: Orthopedic measures, tenotomies, tendon lengthenings or shortenings, and stabilization of joints.

Posterior root sections, that is, cutting the sensory fibers to the spastic group of muscles.

The Stoffel operation, cutting the motor nerve to the spastic muscles.

The latest and newest sympathectomy of the lumbar ganglia, the so called Royle operation.

All these methods have their advocates. The first three in properly selected cases achieve some results, but whatever method is used the prolonged intelligent help of a physiotherapist is essential as all these cases show a tendency to relapse. The fourth method, the Royle operation, I feel convinced was developed on wrong physiological premises and after a very spectacular career, in which the Associated Press and some others played a prominent part, it has already been pronounced of little if any value in spasticity.

In conclusion, I should like to summarize my remarks:

1. The recognition that a focal spinal lesion exists is comparatively easy.
2. The earliest symptom in the vast majority of cases is not pain but paresthesia.
3. Pain is not a necessary symptom for the diagnosis of a spinal lesion.
4. Laminectomy is a safe operation with a very low mortality but requires a special technique.
5. Early operation in spinal fractures with symptoms of a complete lesion is, in my opinion, the wiser course to follow. The further study of these cases by the Ayer test may enable us to avoid laminectomy in many of these cases.
6. The treatment of spasticity is still an unsolved problem though our ideas are becoming crystalized and many of these patients may be improved by combining some of the methods I have referred to.
7. Every focal spinal lesion should be given the benefit of an exploration.

SYMPOSIUM ON TREATMENT OF DUCTLESS GLAND DISORDERS*

WITH PRINCIPAL COMPLAINTS REFERABLE TO OTHER SYSTEMS

WILLIAM ENGELBACH, M.D.
ST. LOUIS

In this symposium my position is to introduce the subject of ductless glandular disorders having their chief complaints referable to special organs or other systems. The amplification and detailed discussion of the relationship of the internal secretions to other medical fields will be referred to various specialists. The undue length of the program precluded the participation of urology, neuropsychiatry, phthisiology, pediatrics, and surgery. It is to be hoped, however, that members of the Society particularly interested in these specialties will aid in the discussion.

The initiatory process of the symposium will be devoted to the demonstration of representative cases in each field, with mention of a few other conditions of each system which have some endocrine bearing.

With regard to laryngology, comparison demonstration of the infant and the adult head shows that at birth there is an absence of development of the sinuses with the exception of the antrum of Highmore. The other sinuses, the orbits, most of the facial bones, and, in fact, the entire head, assume their full size and form after birth. This must depend to an extent upon those hormones which have to do with osseous growth. Thus the conformation of the sinuses, of the orbit, with its effect upon the eye, the orthodontal markings, and the whole physiognomy are probably influenced by the internal secretions. This is exemplified in the cretin, in whom are found the characteristic malposition of the teeth, retrousse nose, internal strabismus, and cretinoid facies. The second description is that of a case of pituitary headache, with chart, showing the effect of treatment. This treatment resulted not only in a complete relief of the headache, but also in changes in the adiposity, pigmentation, dysmenorrhea, albuminuria, hypertension, and other signs. There is no cephalalgia characterized as "pituitary headache." A very persistent, intractable headache in an individual having other classical signs of pituitarism, not responding to other treatment, but reacting definitely to pituitary "replacement" therapy, is considered as a headache of this type. Hyperesthetic rhinitis, the "sneezers," and other rhinal conditions without positive local cause

*Read before the St. Louis Medical Society, October 13, 1925.

in either nose or throat, will probably be discussed in detail by Dr. Senseney.

The ocular changes, which will be discussed by Dr. Wiener, are occupying a considerable space in the recent literature. In a recent visit to New York City, I was surprised to see in the endocrine clinics a large number of cases of glaucoma, keratitis, cataract, etc., which inquiry proved to have been referred for endocrine treatment from ocular clinics. Recently there has been a decided impulse toward the endocrine treatment of various pigmentations of structures of the eye, including the retina. Zentmayer, of Philadelphia, has shown great interest in organic ocular changes due to endocrine disorder, and Walter, of Evanston, Illinois, has made a rather exhaustive study of muscle imbalance associated with ductless gland disorder. A demonstration of a positive pituitary tumor having a homonymous hemianopsia is made, for the reason that a lesion in the region of the hypophysis producing pressure upon the optic nerve or chiasm is supposed to result in a bitemporal hemianopsia, a blindness in each temporal field. Our experience with fifteen cases (thirteen of which were reported in the *Medical Clinics of North America*, 1924, Vol. 7, No. 5), indicates that blindness resulting from pituitary tumor is usually first localized in one eye and is more apt to be of the character of a fleeting, transient scotoma than as ordinarily described in the text. It is dependent upon the position of the optic chiasm or nerve at which the pressure is exerted, the continuation and amount of that pressure, or the self-decompression which the tumor produces. This self-decompression frequently releases the pressure entirely for a long or a short interval, relieving all of the ocular symptoms, as well as other intracranial pressure signs. Another interesting ocular experiment concerned a case of myxedema, diagnosed by the oculist as having albuminuric retinitis and referred to a physician with the suggestion that treatment be directed toward a renal lesion. The patient at that time had albumin and casts in the urine. After a year's treatment for nephritis, this case later was referred to us by Dr. John F. Hardesty. It was found that she had myxedematous retinal changes accompanying other general signs of myxedema. Under two weeks' thyroid treatment her retinal changes disappeared, much to the surprise of the first oculist, who compared the retinal signs before and after the administration of thyroid therapy. You will recall the series of cases of chronic nephritis reported by Percy a few years ago, which were relieved by thyroid medication. May it not be possible that these were primary hypothyroidisms, in which the hypertension, so-called albuminuric retinitis,

pseudo-edema, puffiness of the face, etc., respond to thyroid therapy? "Arteriosclerosis of the retina" is another condition for which retinal changes due to myxedema are commonly mistaken. Rarely it is also possible to relieve the deafness of an old "otosclerosis" by thyroid treatment. This occurred in the experience of a woman who had been treated for four years by a competent aurist, who evidently did not suspect hypothyroidism as a cause.

The study of the relationship of incretory disorder to gynecology is so prolific that only a glimpse of the field can be afforded at this time. For the benefit of my friend Dr. Vogt, who I know has been awaiting this opportunity for years, I will present a few endocrines having as their chief complaint symptoms referable to the genital system. The first case has been demonstrated before the Society several times, as she was the first positive hypogonadism that we were able to study and control for a long period (nine years). She was under observation five years before the proper diagnosis was made and mitigating treatment administered. Her chief complaint, other than a persistent nausea and vomiting, with loss of weight, was an amenorrhea. For her continuous, intractable nausea and vomiting, thorough exploratory operation of the abdomen had been performed twice, without discovery of a pathological lesion. After the second operation, she was given corpus luteum hypodermically, with relief of all symptoms (nausea and vomiting, emaciation, headaches, etc.), except the amenorrhea. The amenorrhea has persisted to the present time. The description contrasting an anterior lobe pituitary insufficiency with a hypogonadism is that of two women, both aged twenty-five, one extremely tall, slender, and fragile, with an upper measurement (vertex to symphysis) shorter than the lower (symphysis to soles of feet), the other short and stocky, about two-thirds the height of the former, having the inverse proportions. Neither of these women was adipose. The individual characteristics and signs cannot be given in detail. Neither had had a menstrual period at any time. The anterior lobe pituitary insufficiency had been in practically normal health throughout her life, whereas the gonadal deficiency had been a chronic invalid, complaining of symptoms referable to the gastro-intestinal tract, as nausea and vomiting, regurgitation of food, and various other signs. The mentality of both was normal. Contrasting with these types of amenorrhea is a bilobar hypopituitarism twenty-five years of age in whom intervals of amenorrhea had persisted for six or eight years, varying from six to fourteen months,

with an occasional period or two intervening. This individual had the classical girdle adiposity, absent in the previous two types of amenorrhea (anterior lobe pituitary and primary gonadal). Many other gynecological signs, as metrorrhagia, dysmenorrhea, frigidity, sterility, overweight of the fetus, hyperemesis, eclampsia, etc., enter into the endocrine relationship of this specialty.

Exception must be taken in regard to Lockwood's paper, read before the Section of Gastro-Intestinal Diseases, at the last meeting of the American Medical Association, in which he states that there is very little relation between the internal secretions and severe *gastro-enterological states*. His paper covers only about seventeen cases and refers mostly to gigantism, acromegaly, and thyroidism. A study of a large number of endocrines proves that in hypogonadism a frequent complaint is a very serious gastro-enteric upset. An illustration is a girl eighteen years of age who had had a constant regurgitation of food for four years, unrelieved by any sort of treatment. The onset of this regurgitation and vomiting had been coincident with that of a complete amenorrhea of four years, after normal occurrence of menstrual periods for a year. Another not infrequent type is subject to a constant pernicious vomiting, referred to above. An interesting case is that of a young married woman, who had undergone a thorough survey at one of our hospitals and had been under the observation of talented specialists in different fields of medicine. Her condition was finally diagnosed as a "chronic appendicitis" and an operation was performed. At the time of this operation, a thorough exploration of the abdomen was made. The vomiting, however, continued as previously. She was re-examined in a number of clinics, without the determination of any definite intra-abdominal or other lesion to account for her symptoms. As is usual in these cases, the diagnosis finally reverted to hysteria or cyclic vomiting. After three years, because of her type and ductless gland symptomatology, she was placed upon endocrine therapy and relieved of the persistent vomiting and associated signs. Another case was a chronic dysentery of a duration of fifteen years. This patient had been examined at various clinics of this and other cities, but had obtained no results from treatment. On the basis of a peculiar pigmentation frequently associated with pituitary disorder (chloasma and vitiligo), she was placed upon pituitary substitution therapy. On this medication her dysentery was relieved entirely for a number of months, during the period of observation. The relation of the internal secretions to the autonomic nervous system, affecting intestinal

peristalsis and secretion, might account for many of the cases of so-called spasticity, hyperperistalsis, and secretory changes, as well as the reflex symptoms to which the gastro-intestinal tract is subject.

For the benefit of Dr. Drew Luten, we mention this bilobar pituitary insufficiency, which we have had the opportunity of studying for over ten years. She was referred originally with a diagnosis of myocarditis. This diagnosis had been made from her frequent attacks of syncope and tachycardia, occurring sometimes as often as four or five times in one day. She had in addition to these cardiovascular signs, migrainous headaches, ocular symptoms, peculiar attacks of dyspnea, ballooning sensation of the abdomen, prolonged attacks of nausea and vomiting, and intervals of amenorrhea varying from three to eight months. After consulting many of the medical profession, receiving variant diagnoses dependent upon the point of view of the examiner, she gained complete relief from pituitary therapy. There has been no recurrence of these symptoms for several years, as determined by occasional observation for minor ailments. The paroxysmal tachycardia, as well as the other symptoms, including the amenorrhea, migraine, ocular signs, and abdominal complaints, has been absent. One other cardiovascular case is briefly abstracted. This was a true hypothyroidism who happened to be in St. John's Hospital nursing her cretin baby. She herself was not under medical observation at the time. During the quiet and rest of her stay in the hospital, while her baby was being treated, she suddenly developed a marked edema, with a cardiac incompetency, which were immediately relieved by thyroid therapy without other medicant. Being already in a state of quiet, the patient was merely given thyroid substance by mouth, and the marked true edema, dyspnea, and cyanosis disappeared.

Among the *dermal lesions*, reference first is made to a bilobar pituitary insufficiency in a girl aged twenty. She had a pronounced chloasma of the face, neck, hands (to the wrist), chest, and other portions of the body. Her history had been normal until the age of twenty, when her periods ceased, she began to assume an enormous obesity, and coincidentally this chloasma and vitiligo appeared. The interesting phase of this case is that the pigmentation disappeared almost entirely on pituitary treatment, which also relieved her other symptoms. Another case is an acromegaly in the male whose chloasma was discernible over the forehead and upper face. He had also the separation of the lower teeth and the osseous make-up of the acromegalic individual. Owing to his unusual hypersexuality

in spite of his philosophy and disciplinary training, it became necessary for him to resign from his religious order, the vows of which required celibacy. This case is demonstrated to correlate the sexual function of the anterior lobe pituitary gland with pigmentation, both of which have been recently accredited by Professor Herbert Evans, of the University of California, and Professor Abel, Physiologist of Johns Hopkins University. Besides the pigmentation of endocrine disorder, the *hair distribution* is a most interesting and easily recognized physical sign. An illustration is a marked facial hypertrichosis in the female, sufficient in itself to determine the diagnosis of suprarenal cortex disorder. It is believed that the suprarenal cortex and the anterior lobe of the hypophysis have reciprocal function in producing hair growth, and the idea is prevalent that in some cases at least facial hypertrichosis in the female is due to anterior lobe pituitary disorder. In both of these disorders (suprarenal cortex and anterior lobe hypophysis), marked menstrual disturbances, as metrorrhagia or prolonged amenorrhea, often occur, helping to connect the condition with ductless gland disorder. The localized alopecias have an entirely different course from that of generalized hypotrichosis, in which all of the bodily and scalp hair falls out or fails to grow. In a generalized hypotrichosis, the prognosis usually is favorable and the hair distribution normally present recurs after a time, although a number of years may elapse in the interim.

University Club Building.

GYNECOLOGICAL CONDITIONS

WM. H. VOGT, M.D.
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It is with some trepidation that I attempt to discuss the paper of one who knows more about endocrinology in relation to gynecology than do most gynecologists. It has been claimed that gynecology is a surgical specialty, that the gynecologist is a pelvic and abdominal surgeon and that his best results are obtained from surgical intervention. The fact is, that the gynecologist is becoming more and more conservative each year and the well informed man in this specialty is doing fewer surgical operations than in years gone by.

The subject of endocrinology is far-reaching and applies to practically every branch of medicine but particularly to gynecology, so that the well trained gynecologist can ill afford to allow anything in this vast study to escape him. I think that Dr. Engelbach has been instrumental in helping the various specialties in the diagnosis and treatment of many cases

by calling the attention of the profession to the relation of many obscure conditions to the endocrine system.

In considering any subject bearing upon the endocrinous glands one must keep in mind very clearly that there exists a very marked correlation between the glands that constitute this system, that normally these ductless glands perform their functions in such a manner that there is an intimate and perfect physiological relationship. If for any reason a perverted secretion of any one gland takes place, the normal balance is upset, disturbances of other glands then take place and a readjustment becomes necessary. If one expects to accomplish anything in the study of endocrinous cases in relation to gynecology, he must attempt to place these cases in certain groups. The term dysfunction is of no value unless it is modified by the term hypo or hyper function. Then too, it must be kept in mind that certain ductless glands will have been in a state of hyper-function only to have later gone over into a state of hypo-function and that rarely in this study do we find only one or the other of the glands of internal secretion at fault. Usually a number of glands are involved. If the pituitary gland is in question, we must differentiate between a disturbance of its anterior or posterior lobes, or both. A knowledge of the hormonal signs will help to make such a classification.

If we stop to consider the many changes that take place in the human female body and mind, from the time of birth to puberty, from puberty through her active sexual life, and then again the very marked changes occurring in the climacterium, we will understand that there must be a great number of influences active to produce these changes. That the ovary is an organ of internal secretion is proved by evidence from experimentation. The action of the ovarian secretion, however, seems to exert only a balancing influence on other glands and either suppresses or increases their activity. And so it is with the other glands of internal secretion, one depending more or less, on the activity of the others. There are undisputed facts which clearly establish the relationship of these glands to each other and the important role they play in puberty. Prior to the time of puberty the follicular portion of the ovary has been quiescent, i.e., so far as menstruation is concerned and it may be that the thymus gland during these years has exerted an inhibitory influence upon the pituitary gland and that after the fourteenth year the thymus gland atrophies and the inhibiting influence upon the pituitary gland ceases, which in turn stimulates the ovary to activity. After the menstrual period is reached we all know of the

varieties of menstrual types that take place; the amenorrhea, the dysmenorrhea, menorrhagia, etc.: If it is accepted as a fact that the changes which take place in the endometrium, as seen in the so-called cases of interstitial endometritis, are identical to the changes in the mucous membrane of the uterus, in the premenstrual or menstrual period, then we must assume that these changes are due to endocrinous influences and conclude that our treatment of these cases by curettage, as has been only too often demonstrated, has been entirely wrong. The curette would then be used solely for diagnostic purposes, for removal of polypoid growths, and for the removal of retained secundines. The frequent use of the curette has in many cases of menstrual disturbances been displaced by the careful and judicious treatment of the endocrinous condition. That such menstrual disturbances may be due to some pelvic pathology or even due to some systemic disturbance otherwise, must be kept in mind, but in the absence of any such evidence our attention must be drawn to the ductless glands. Pituitary and thyroid amenorrheas are common. In the amenorrhea due to thyroid insufficiency, the very early history is important. We find, for example, in taking the early history of hypo-thyroid cases that the individual was of unusual size at birth. Larger babies weighing twelve or more pounds at birth should be suspected of having suffered with prenatal thyroid insufficiency. Von Winckle has found that babies at birth weighing over eight and one-half pounds are over matured in more than 80 per cent. of cases. This then leads us to the interesting question of why this over-maturity occurs, and why labor does not set in at the calculated proper time. The onset of labor has puzzled obstetricians for many years and it is possible or even probable that the uterine contractions at the termination of pregnancy are brought about by a liberation of the pituitary substance through the withdrawal of some inhibiting influence exerted upon the gland during pregnancy.

To again refer to the menstrual history of thyroid patients, it will be found that the hypo-thyroid girl menstruates at a much earlier age than the normal, that the flow is much more profuse and increases in duration, particularly in the early menstrual periods, and that there is usually absence of dysmenorrhea. Thyroid secretion seems to be an inhibiting hormone to the gonads. When there is an increased thyroid secretion the inhibition is great enough, not only to delay the first menstrual appearance, but to suppress the menstrual flow completely or produce the short and scanty periods

and those that are so frequently accompanied by pain.

The relation of the endocrine system to pregnancy is still a field open for much investigation and we can only stretch our imagination to evolve reasonable theories. But how shall we explain the mammary changes, the thyroid enlargement, the increased pigmentation of the skin, the enlargement of the breasts during pregnancy, if not by some endocrinous activity? The increase in weight so often observed in pregnant women is undoubtedly due, in many cases, to disturbed metabolism of pituitary origin. The lips, dull expression and high sugar tolerance, often simulating acromegaly is too common to dilate upon.

My time is too limited to take up any phase of the treatment except to say, that we have not found in the endocrinous substance a panacea for all woman's ills and the results of treatment are not universally good, but the subject deserves a more careful and painstaking study and it is probable that with a better knowledge of these substances and with improved methods of administration and with more careful diagnosis of the endocrine condition, there will be a constant and marked advance in these already valuable remedies.

DISEASES OF THE NOSE AND THROAT

E. T. SENSENEY, M.D.

ST. LOUIS

The subject of Dr. Engelbach's paper has been of intense interest to me for years. Some twelve years ago, incited by Citelli's researches proving the presence of pituitary tissue in the pharynx, I presented a thesis to the American Rhinological, Laryngological and Otological Society, which embraced a theory and certain anatomical studies on rodents. I showed that a foramen persisted in the rabbit allowing free anastomosis with the central vein of the pharynx and the venous supply of the hypophysis cerebri. Not satisfied with the theory of mechanical obstruction of respiration, I felt that the adenoid facies (pointed chin, high arched palate, under development and mental apathy) was due in some way to interference with pituitary function. This I attempted to prove in young rabbits, by injecting irritating substances in this pharyngeal region, hoping by creating a chronic hyperemia to produce a partial venous stasis about the pituitary. All my rabbits, ten controls and ten injected ones, were carried off by the "snuffles" in a very short time, and my experiment came to naught.

As early as 1900, Professor Wagner V. Jauregg called attention to the deafness of cretinism and myxoedema and referred to a report of the Myxoedema Committee of the London Clinical Society that 50 per cent. of the adults suffering from myxoedema were deaf, and that this deafness was cured by thyroid treatment.

It is a clinical fact, fairly well accepted, that focal infections of the nose and throat are associated with and are causative of glandular syndromes. It is also established clinically that certain ductless glandular disorders may be productive of symptoms referable to the ear, nose, and throat. It is quite possible then, to establish a "vicious circle," the origin and the end result both in the nose and throat. In support of this one may mention the causation of glycosuria by infections of the nose and throat, and the increased virulence of infections in the presence of glycosuria; the productive role of infections of the nose and throat in diseases of the thyroid and the nasal phenomena in the thyroid disturbance.

Rhinorrhea and sneezing are complex acts involving practically all sensory nerves of the body. It must be remembered that the post-ganglionic fibres involved are given off from the cells of the nasal ganglion. That hyperaesthetic rhinitis may be caused by both hypo and hyper-thyroidism has been noted. Whether the waste products of hypothyroidism or the toxemia of hyperthyroidism irritate the terminal filaments; or whether the nasal ganglion is directly affected, or whether the stimulus is preganglionic is an academic question. Mithoefer believes that in cases of hypothyroidism the cellular protoplasm is constantly loaded with an excess of mucin and fat and that the headaches are due to an infiltration of nerve cells and the meninges. According to physiologists the efferent portion of reflex arcs is not capable of reflex reactions. If this be true the cells of the nasal ganglion require for their excitation impulses transmitted to them through afferent neurons. Sluder has found that the cells of the nasal ganglion may be in a state of chronic irritability and hence much more susceptible to excitation, and that the nasal ganglion chronically irritated may give rise to intense pain, "lower half" headache, or to vasomotor and secretory disturbance accompanied by rhinorrhoea and sneezing. That these explosions may be incited by toxemias of various sorts and even the emotions. I have had one case in which the playing of auction whist produced severe sneezing, intense congestion of the nasal mucous membrane, over-secretion of mucous, injection of the conjunctiva, and photophobia. Sluder has shown

that cocainization of the nasal ganglion will relieve the headache and the vasomotor and secretory symptoms. From my own studies in the relation of ovarian disturbance and nasal ganglion neuroses, I have come to the conclusion that two factors exist; an irritability of the nasal ganglion due to existing or pre-existing post-ethmoiditis and sphenoiditis; plus the endocrine disturbance. This conclusion is borne out by the fact that rhinorrhoea and sneezing, and lower half headaches, are not common symptoms of endocrine disturbance, and that in practically all cases where these symptoms were present in the cases I have studied, there was evidence of existing or of previous sinus pathology. These cases were placed in three groups; cases following ovariectomy, with complete absence of ovarian secretion; those in which the ovarian secretion was diminished in amount constantly; and those cases in which the headaches occurred just prior to the menstrual period, temporary decrease in ovarian secretion. In practically all of these cases there was evidence of increased irritability of the nasal ganglion, nearly all could be relieved by cocainization of the ganglion, and nearly all were cured or greatly benefited by endocrine medication.

DISEASES OF THE EYE

MEYER WIENER, M.D.

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In analyzing the effects of the glands of internal secretion on the eye, one must consider the results obtained by experimental investigation, as well as those from clinical observations. The former are necessarily limited on account of the restrictions necessarily imposed in experiments on animals. While the admitted check or stimulating influence of the secretions of one set of glands over another or combination of glands, complicates certain conclusions one might be inclined to draw from a more simple scheme of things. The general influence the thyroid secretions and parathyroid secretions have on the human eye are fairly well known. No one questions the relation between exophthalmos and hyperactivity of the thyroid. Also the accompanying widening of the palpebral fissures and marked weakness of convergence. Bahn mentions falling of the brows and lashes, eczematous lid inflammations, deep keratitis, certain types of cataract, uveitis, optic neuritis and retinitis pigmentosa as being the most frequent ocular conditions associated with hypothyroidism.

A few years ago I observed, in a young girl attaining the age of puberty, a rapid change

of the brows and lashes to grey with eventual complete loss of all hairs on the brows and lids. This patient was treated by Dr. Jonas for hypofunction of the ovaries. Her brows and lashes are now of almost average thickness.

I also saw a case recently with Dr. Engelbach of sudden loss of pigment in the lashes and brow of one side of the face in a young woman, which Dr. Engelbach considers to be of endocrine origin.

Dr. J. W. Charles reported a case of hemorrhage in the vitreous and papilledema in one eye, with marked striping of the vessels in the other. After thyroid treatment the fundus was greatly improved and the vision restored.

A case of retinitis proliferens from anaemia produced by Hodgkins disease was reported by Bell. Under sod. cacodylate and removal of diseased tonsils the case improved and the patient was able to resume his occupation after eight weeks.

Dr. Lawrence Post reported a case of amblyopia following epistaxis in thrombo-plastic purpura in a six-year-old girl. Splenectomy instantly relieved the hemorrhage, and changed the blood picture restoring the child.

It has been an observation of mine that insufficiency of convergence is one of the earliest signs of hyperactivity of the thyroid and in almost every case of this kind where the patient usually comes to the ophthalmologist complaining of headache and sleepiness on reading, we have found moist palms, tremor, shortness of breath and tendency to enlarge thyroid. I have not been able to convince my friend Dr. Olmstead of this relationship. He has examined quite a number of patients with those symptoms and usually I get the report that the patient is anaemic or run down physically but with no increased basal metabolism.

Jackson describes the hypothyroidic eye as being dull, apparently small, shrunken, expressionless, and featurally insignificant. Whether due to orbital infiltration or actual enophthalmos is questionable.

I feel certain that keratoconus is due to a change in internal secretion, probably lack of development of the gonads. It almost always occurs about the age of puberty and mostly in girls. I have had at least three cases which showed definite and immediate improvement with the local instillation of adrenalin. My reason for trying out this drug was its known influence in aborting actasia of the cornea, as observed by Dr. Paul Pontius, of Philadelphia.

Amoretti feels that there is ample proof of the relation of internal secretion to keratoconus.

Von Imre, Jr., attributed all three of the cases of megalophthalmos reported by him to endocrine origin. One was complicated with

glaucoma and marked sympatheticotonia and ovarian insufficiency. In this case, administration of ovarian extract reduced the tension of the right eye from 26 to 15 and the left from 36 to 23 mm. and this improvement continued for months with persistent use of the extract.

Removal of the parathyroids produces death from tetany. Falta has observed an increase in the refraction of the eye amounting to 3 to 4 diopters in tetany attributable to a spasm of the ciliary muscle. It is probable that some forms of zonular cataract are due to hypofunction of the parathyroids. Extirpation of the parathyroids in rats is followed by ossification of the lenses. Hesse found in 81 per cent. of all his cases of zonular cataract symptoms of tetany, and in 41 cases of tetany, 4 cases of zonular cataract. It has been known for a long time that zonular cataract occurs in children with bad teeth from a deficiency in enamel, and suffering from rickets and convulsions.

The pituitary gland affects the eyes only in an indirect way. Optic nerve atrophy is due to enlargement and pressure of the gland and not to internal secretion.

Little is known about the influence of hypersecretion of the pancreas. Of the hypofunction we have all the effects on the eye of diabetes such as hemorrhages in the retina, iritis, cataract, muscle paralysis, etc. These, however, are probably attributable to indirect influences. Loewi first observed that adrenalin dilated the pupil in diabetic patients. His adrenalin mydriasis as a sign of pancreatic insufficiency has been also noted by Cockcroft (*Brit. Med. J.*, May 15, 1921).

Review of the literature by Maud Corvill on bitemporal contraction of the fields of vision in pregnancy shows that it has been observed for the last twenty years and has been associated with the normal enlargement of the hypophysis during pregnancy. Its frequency, importance and tendency to become more marked in successive pregnancies are demonstrated by the author upon a study of 100 pregnant women at the New England Hospital for pregnant women.

There are many other diseases and pathological conditions which probably are caused or influenced by abnormal function of the ductless glands. I personally feel that progressive myopia is one of these conditions, but convincing proof is lacking. A great deal has been learned in the last few years. A great deal more will probably be contributed in the near future.

CARDIOVASCULAR DISTURBANCES

DREW LUTEN, M.D.

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The special cardiac symptoms that go with disturbance of various glands are almost entirely confined to thyroid disease. I have had occasion recently to make a few electrocardiograms on patients with diabetes, and have been rather struck with certain minor changes in the electrocardiogram, but it seems to me that they are such changes as might come in patients of equal age with diseases that are not glandular—they seem purely accidental; although the thing is worth thinking about.

The effects of disturbance of the thyroid on the heart must be considered from both standpoints: hyperactivity and hypoactivity. To consider first the effects of hyposecretion: A short time ago there appeared an article based on the study of a few cases of the heart in myxedema. The author regarded the effects as being pretty definite. In the last number (which is also the first number) of the *American Heart Journal*, a St. Louis publication, there is an article by Willius, of the Mayo Clinic, on the heart in myxedema. He reports a study of the heart in 162 cases of myxedema, and his conclusions are that in such cases there is no special effect—perhaps I am stating it a little extremely. He did not see any cases that appeared to have cardiac decompensation, or any striking symptoms, as a result of hyposecretion of the thyroid. There was a certain number of these patients who had heart disease, but he rather thought that any comparable number of patients with almost any disease might show a similar percentage of heart lesions. One case did get better of his cardiac signs coincidentally with thyroid administration, and improved in other ways. This study seems to indicate that hyposecretion of the thyroid does not have any considerable effect on the heart.

In a certain number of these patients, however, he took electrocardiograms before and after the administration of thyroid, and found in some that the electrocardiogram was changed. It showed evidence of beneficial effect from thyroidtherapy. It would seem pretty clear that thyroid administration in those patients did have some favorable effect, even though thyroid disease had not gone to the extent of causing symptoms and the usual clinical evidences of heart disease. It would appear, from Willius' study, that it rarely goes that far.

My own experience with such cases has been quite limited. One patient with complete heart block and a lowered basal rate, but without other evidences of hypothyroidism, regained

normal mechanism under thyroid administration. The thyroid medication was withdrawn, and after about ten days the block reappeared. On subsequent administration of thyroid over a longer period of time his heart block did not disappear, but it disappeared after administration of Lugol's solution. Another patient behaved somewhat similarly.

These cases hardly prove so far as my own experience goes, that thyroid administration affects favorably such patients. I think we can conclude, however, that hyposecretion of the thyroid does affect the heart to some extent in many cases but that decompensation and the usual evidences of heart disease must be rather rare.

The cardiac symptoms that accompany hypersecretion of the thyroid are too well known to justify any extended remarks. Just how much these symptoms imply actual damage to the heart, however, is another matter. Those who have studied the hearts of patients with thyrotoxicosis have found round cell infiltration, and focal necrosis, but these occur in other cases. It would seem, however, hardly open to doubt, with so common an occurrence of serious heart symptoms and signs in patients with thyroid disease, whether we find pathological evidence of involvement or not, that hypersecretion of the thyroid does quite frequently affect unfavorably the heart.

Then the question of treatment. Rest must be, of course, the main dependence. I rather hoped Dr. Engelbach would give us his experience in the use of quinidin in patients with thyrotoxicosis who have auricular fibrillation. This disorder is quite common in such patients and it has been a matter of much discussion as to whether they should have quinidin or not. I think it is undoubtedly true that auricular fibrillation is more common, relatively, in patients with hyperthyroidism than in almost any other disease. It is also true that in them normal mechanism is more easily restored by quinidin than in other patients with fibrillation.

It is still, it seems to me, open to question whether it is a good thing to restore normal mechanism in patients with thyroid disease even though it is easy to do it. If you give digitalis to a patient with auricular fibrillation you can usually hold his rate down to normal limits, whereas if you give quinidin to a patient with thyroid disease the patient will have a rapid heart after normal mechanism is restored. This point is well illustrated by a case of Dr. Grant's of which he told me. This patient had thyrotoxicosis and exhibited frequent attacks of auricular fibrillation. When the patient entered the hospital the rate during fibrillation was 150. And during the periods of normal mechanism the rate was also 150. He then

digitalized the patient, after a few days. The periods of fibrillation persisted, but the rate during these attacks was now 80, while the rate during the periods of normal mechanism was 135. It would appear that this patient would not have been benefited by quinidin, which, if successful, would have resulted in a continuously fast rate of sinus origin.

DERMAL LESIONS

M. F. ENGMAN, M.D.

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There has been a great deal written in dermatological literature in the last years on cutaneous symptoms of endocrin conditions but little of it has been controlled by actual investigation. It is mostly theoretical. I think, however, dermatologists are under a great debt of gratitude to Dr. Engelbach for a classification of these lesions and for the work he has done in their elucidation.

Vitiligo is a very chronic condition and is a dystrophy of the pigment formation of the skin which frequently runs in families. It is in some instances supposed to be associated with endocrin abnormalities. When vitiligo disappears under a certain treatment it is well to assume that the treatment had the effect, as such pigment dystrophies are exceedingly chronic and last usually a number of years or for a lifetime.

About eighteen years ago I became interested in hypothyroidism through the study of a case. I was called to see a woman of 40 who had dermatitis exfoliativa, a universal inflammatory condition of the whole body. She was treated with the usual salves and applications without very much result. One day while waiting in the parlor of her house I observed on the mantel a photograph of the woman taken some years before. This photograph showed distinct supraclavicular, myxedematous pads which gave me a suggestion. I immediately began giving her thyroid extract when lo and behold her dermatological symptoms rapidly cleared up. She had other symptoms of hypothyroidism. From there I began the study of hypothyroidism in relation to skin diseases, but purely a clinical study. Years elapsed when one day I happened to hear one of the first papers read by Kendall, and as the symptoms he described coincided with my own studies I asked for an interview with him and we spent the afternoon together. He was then doing his early work on thyroid at Mayo Clinic which ultimately produced the discovery and isolation of thyroxin. The result of our conversation was that we would carry on certain clinical investigations here with the various

products derived from the thyroid gland with which he was working. One preparation he called Thyroid "A" which contained the most active principal of thyroid and produced hypothyroidism symptoms. Another preparation he called Thyroid "B" which was supposed to have some effect on the skin in hypothyroid cases. We used this in our study for some years and it was perfectly marvelous, the results we obtained in its use. Dr. Kendall's work called him more into the study of Thyroid "A" and he dropped the preparation of Thyroid "B" and we, of course, could not then obtain it, but there were many patients for years who were very anxious to obtain the preparation as it gave them great relief from various dermatological symptoms. Thyroid preparations are not standardized and the dose of a given batch of the preparation is unsatisfactory as we cannot each time scientifically gauge the dose of a given preparation.

I will delay you just a few moments to show a few lantern slides of a few of the thyroid conditions we have observed:

Here is a case of dermatitis that is easily relieved by thyroid extract and we have associated it with hypothyroidism. As you see, the dermatitis is limited to the face and the décolleté region is sharply defined.

Here is another case with the same condition. You can see in this the sharp line of demarcation just below the clavicles. There is usually associated with these myxedematous pads.

Here is a little cretin with marked pigmentation on the body, the pigmentation en cuirasse. The following pictures represent characteristic symptoms of hypothyroidism, that is, marked dryness of the palms with an increase and deepening of the lines of the palms and fingers. The feet, as you see, show the same conditions and in my experience such a palm or sole is always associated with hypothyroidism.

It is only possible, in such a short time, to barely touch upon some of the important cutaneous symptoms of endocrin conditions. Dr. Engelbach has pointed the way for dermatologists, in the study of the relation of endocrinology to skin diseases, more than any living dermatologist.

ADDITIONAL DISCUSSION

DR. JOHN ZAHORSKY: I might tell of some of the difficulties we have in children's practice to know whether to administer thyroid extract. There is a disease due to absence of the thyroid gland called sporadic cretinism. When this disorder is well developed in children one year or more old it is very easy to recognize, but we want to recognize this disorder early in young babies of a few weeks or months old so that we can begin appropriate treatment. If you commence the administration of thyroid to young babies just at the beginning of thyroid deficiency you can get a perfect specimen

of a boy or girl. However, if you wait until the child is one year old then your results are not always perfect. While you may cure the child sometimes it remains with certain definite defects. Consequently pediatricians want to begin treatment early.

Now how can you recognize hypothyroidism early in young babies? Of course we have the classical symptoms: the large tongue, big feet and hands and peculiar shape of the face, deficiency in growth, and others; but we do not want to wait until these changes are so marked. So we often give thyroid merely on suspicion. If it has a large tongue which protrudes, a muddy complexion, has a tendency to subnormal temperature, and skin lesions of a peculiar nature, which you cannot ascribe to anything else, I begin the treatment by thyroid extract. After a time they get better and grow well and your hypothyroid symptoms disappear.

Then comes the question, Has this child been a cretin? You can determine by basal metabolism. It is very difficult in a child. I don't do the work myself but get hospitals and certain laboratories to do it, and the results we get in determining basal metabolism are so contradictory by different men at different times that it amounts to very little. So we still have to depend on what we observe. I have two cases now I have followed for a number of years I thought were hypothyroids. I am afraid to stop the treatment. Shall I wait? As a rule, we give thyroid indefinitely as long as it seems to do the child good.

The value of other glandular extracts has not yet been proven. The only one that is of service is the thyroid extract. We use it in other conditions than cretinism occasionally if we think the child needs a little stimulant even without hypothyroidism. We use it to stimulate metabolism, when it has an enlarged gland, or chronic eczema, and sometimes we get good results. The subject is an exceedingly important one, and I hope it will continue to be studied by such men as Dr. Engelbach, for outside of the thyroid, it is in a very unsatisfactory condition.

DR. HENRIETTA A. S. BORCK: I would like to ask Dr. Engelbach what to do in the case of a patient who has had persistent vomiting for about twenty years. I have tried adrenalin and other medication, and flushing out her stomach—everything that a physician could think of, with no result.

DR. JULES M. BRADY: I would like to express my thanks to Dr. Engelbach for what he has taught us the last several years, and particularly for his recent work in X-ray studies of the wrists of young children to determine the possibility of lack of thyroid secretion in a particular child. Since the publication of this article a few years ago we have made it a routine practice to ray the wrists when there was any suspicion of a failure of the ossification centers to appear. It seems to me the procedure is of considerable value and that time will prove it more and more useful.

Another point which Dr. Engelbach has taught us is about these fat children of 6 and 7 years of age. We see a good many of them. The treatment he has advised certainly gives good results in some cases. He has already pointed out that they should be treated early, the best results being obtained while they are young. Almost every case that comes to us that has not done well had been treated with thyroid; I refer particularly to idiotic infants and cases of Little's Disease or spastic paraplegia.

A thorough study and proper diagnosis would avoid this.

DR. ENGELBACH (*Closing*): I certainly am indebted to my colleagues for their very liberal discussion. This discussion has demonstrated two points:

(1) that endocrinological studies have already entered all special branches of medicine, and (2) that evidently the most exact knowledge of the internal secretions is obtainable from the specialist in his respective field. This is as it should be, as it is the pediatrician, surgeon, and other specialists who must aid the clinician and general practitioner in obtaining more information in every growing subject.

I was particularly grateful for Dr. Zahorsky's and Dr. Brady's discussion. It is true that in congenital hypothyroidism, as well as in all incretory disorders, early diagnosis is imperative. One of the causes for the present poor results in these cases is late diagnosis. The statement may seem ridiculous, but I believe that the time may come when the diagnosis of cretinism or congenital hypothyroidism will be made during prenatal life. A diagnostic indicator in this regard may be the variation in thyroid function of the pregnant woman. We know, for instance, that a certain number of pregnant women have a physiological enlargement of the thyroid during pregnancy. It is also recognized that this type of pregnant woman does not have as much toxemia as other pregnancies. Recently it has been shown that the basal metabolic rate in a certain percentage of pregnancies is increased from +15 to +25 per cent. In observing a few of these women having an increased basal metabolic rate during gestation, we have found the baby to be of normal size, not weighing more than seven pounds, and X-ray examination showed the osseous system to be normal at birth. The problem arises as to whether it is not possible to determine the thyroid function of the pregnant woman with sufficient accuracy to prevent the development of a hypothyroid baby during intra-uterine life. If this could be done by basal metabolic and clinical studies, the baby might not exceed seven pounds in weight due to decreased thyroid function. It can be understood how this would prevent many of the serious accidents of labor, due to increased size of the fetus, and many of the tragedies of later life occurring from the defectiveness of these children.

The second point with regard to early diagnosis after birth relates to X-ray studies of the osseous system. These should be made particularly in children who weigh more than seven or eight pounds. The knee and ankle are the only bones to be X-rayed at this age. Comparison of the nuclei of these bones with those of normal children should be made, it being known that the lower epiphysis of the femur, the upper epiphysis of the tibia, and two tarsal centers are present in the normal child at birth. If these osseous centers are not present at birth, in an oversized baby, thyroid treatment should be instituted at once.

I regret that Dr. Wiener did not finish his discussion, as he has done some very interesting work with regard to the cornea, eye muscle imbalance, pigmentation, perimeter defects, pupillary changes, etc., as related to the ductless glands. During Professor Fuchs' visit to this city, at which time he spent an afternoon in my office, I was unable to obtain much expression from him regarding ocular changes in endocrine individuals. I have noted, however, that, following his visit to St. Louis, he gave a lecture on this subject in Philadelphia. I have not been able to obtain this lecture.

The work of Dr. Senseney on the nose and throat precedes mine. His remarks concerning the "sneezers" were particularly interesting. One very interesting case of this type was a woman who had a posterior lobe pituitary insufficiency. She afterwards became pregnant and related the above diagnosis to her obstetrician, who refuted the idea on the basis that she could not become pregnant if she had a

pituitary disorder. Our contention as to this is that there may be a separate involvement of either lobe of the hypophysis, without a disorder of the other; for instance, of the posterior lobe, without affection of the anterior lobe. In such case, the genital sign of sterility ordinarily associated with bilobar hypophyseal insufficiency is absent.

I had hoped that Dr. Luten would present some of the unusual vasomotor disturbances found in endocrine disorder, particularly in hyperthyroidism. The relation of the autonomic nervous system to the internal secretions, long accepted, has recently been questioned, and the explanation of these vasomotor disturbances therefore, is uncertain. We have tried to procure auricular flutter or fibrillation under the electrocardiograph in those individuals who have had such conditions. We were unable to do this by administering adrenalin, thyroxin, ovarian substance, or other ductless gland preparation found on the market.

Dr. Engman was very kind to show us some of his original researches bearing upon the dermal effect of thyroid preparation. With regard to the question of the use of the thyroxin, the oral administration of the early preparations was nauseating and usually productive of vomiting. The later preparation of Eli Lilly Company, however, has been changed so that this gastro-intestinal reaction does not occur. Ordinarily we give desiccated thyroid substance by mouth and measure the reaction in the adult by the clinical signs and basal metabolic rate. In children we use as the measure of the tolerant dosage the rectal temperature and the body weight. We have not been able to rely upon the basal metabolic rate in children, even in the more advanced ages, and would advise those who are using the test to employ a range wider than -10 to $+10$ per cent. At the present time we are using -20 to $+20$ per cent. As far as can be determined, the osseous growth, as demonstrated by serial X-ray pictures according to age, is much more definite as to the physical reaction in children than any other one sign. It is not the physical reaction, however, that is most desirable. It is the mental development of the child for which we are striving. We agree with Dr. Brady that the differential diagnosis of these defections in children is very difficult, requiring great thought and careful interpretation. In this respect, comparative X-ray studies of the osseous system corresponding to age have been of considerable aid, although this means is in itself not infallible.

I am sorry that I cannot answer the question with regard to vomiting. I would again thank those who have discussed the paper. More information on this subject has been obtainable from the discussions than was imparted in the introductory remarks.

HICCUP: THE WINNIPEG EPIDEMICS

During November and December, 1919, Winnipeg experienced its first epidemic of hiccup, an extensive outbreak of at least 1,000 cases, according to the report by Fred T. Cadham, Winnipeg, Manit. (*Journal A. M. A.*, Feb. 21, 1925). A further, but smaller, outbreak occurred in 1922. It recurred in November, 1924, during which epidemic a record of 1,400 cases was obtained. The population of Winnipeg and its suburbs is approximately a quarter of a million. During each epidemic all the cases appeared within a period of six weeks. Cases were noted in the surrounding towns of Manitoba one week subsequent to its appearance in the city. Only twice was a record obtained in which more than a single case occurred in a household and when two cases did occur, the onset was simultaneous.

Each outbreak took place early in November, coincident with the onset of winter, reached its height by the first of December, and declined rapidly. No definite etiologic factor was established. Cultures made from the nasopharyngeal secretion obtained from patients invariably yielded a streptococcus. This was an oval shaped, green-producing coccus, nonhemolytic, fermenting dextrose, lactose and maltose, and insoluble in bile. It rapidly died on subcultivation. Using the method described by Rosenow, separate cultures of this strain, obtained from sixteen patients, were injected into sixteen rabbits, five of which developed myoclonic spasms of the diaphragm, intermittent in character, and lasting from one to thirty-six hours. The filtrate from cultures of this organism in fluid mediums also produced these spasms in two rabbits out of eight inoculated. Each epidemic of singultus has been associated with an epidemic of an illness of short duration with varied symptoms, at present designated, with professional aptitude, by the blanket term "influenza." The first epidemic of hiccup in 1919 was coincident with Winnipeg's first epidemic of encephalitis. During the lesser singultus epidemic, in 1921, there were reported thirty-one cases of encephalitis. In the winter season of 1922-1923, 108 cases were noted, but during that season no record was obtained of a single case of hiccup. Three cases of encephalitis during the epidemic of 1919 were ushered in by hiccup. One patient in 1921 developed hiccup simultaneously with myoclonia of the arms, legs and abdomen. During the recent epidemic of singultus, a woman, aged 40, had an attack of herpes zoster, followed two weeks later by insomnia and excitability. There was a striking similarity between the epidemics of hiccup and encephalitis in the difficulty to trace contact; in the records of but a single case in a home, and also in the seasonal incidence. No evidence was obtained locally of any case of encephalitis in which there had been a previous attack of hiccup. The illness was self-limited; therefore it is difficult to evaluate any method of therapeutics that may have been used in these epidemics. No fatal result from an attack of hiccup has been reported in the local epidemics. The nature of the relationship of epidemic hiccup to epidemic encephalitis is not yet determined. In these epidemics many features present themselves for consideration; the difficulty of tracing direct contact; the high incidence in males; the association with a streptococcus and the relationship to influenza and encephalitis. Then, too, there are the interesting symptoms such as the intermittent character of the spasms, the neuritis, slow pulse and low temperature findings. The clinical evidence is such as to encourage a further investigation of the theory that there is, widespread in the community, a disease, suggestive of an infection of the central nervous system, with symptoms varying from those of a mild, acute neuritis to those of epidemic encephalitis, and including hiccup.

PRODUCTION OF LIVER NECROSIS

REUBEN OTTENBERG and HAROLD A. ABRAMSON, New York (*Journal A. M. A.*, March 14, 1925), report on experiments undertaken primarily to determine the upper safe limits of dosage of tetrachlorphenolphthalein and tetrabromphenolphthalein. The doses needed to produce severe symptoms and liver lesions were enormously larger than those used in the tetrachlorphenolphthalein test for liver function (0.005 gm. per kilogram). While the amount of tetrabromphenolphthalein used for gallbladder visualization (0.1 gm. per kilogram) is also safely below the toxic dose, the margin is not so large, and suggests the necessity of caution in cases in which the liver parenchyma is already damaged by disease.

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JUNE, 1926

EDITORIALS

THE ST. LOUIS MEETING

The 69th Annual Meeting of our Association, held in Saint Louis May 17-20, gave the members who attended the meeting an opportunity to observe many interesting clinical demonstrations at the Washington University Medical School and the Saint Louis University Medical School in addition to listening to papers many of which were of a highly instructive character. The attendance was a disappointment, there being only 427 registered. Preparations had been made for an attendance of 600 or 700.

The session was favored by the presence of Dr. John A. Witherspoon, of Nashville, Tenn., the guest of the Association, Dr. F. Park Lewis, Buffalo, N. Y., and the newly elected President-Elect of the American Medical Association, Dr. Jabez N. Jackson, of Kansas City. All these gentlemen spoke at the night session on Wednesday, May 19, following the address of our President, Dr. E. P. North, on "The Responsibility of Organized Medicine to the Public." His address received much favorable comment, particularly that portion which dealt with the revocation of licenses obtained through fraud, the question of establishing another reputable medical school in the state and eliminating the Class C medical schools, two of which were involved in the diploma mill scandal. The House of Delegates adopted a resolution extending a vote of thanks to Dr. North and commending him for his "efforts to raise the standards of medical education and practice and to bring to light methods that were calculated to undermine the integrity and high standing of the medical profession," and Dr. Witherspoon in his address to the Association paid a tribute to Dr. North for the courageous stand he had taken.

The House of Delegates held its first session on Monday, May 17, and devoted the entire day to the consideration of the problems of the organization. The reports of the council and of other officers showed a most encouraging condition of the affairs of the organization. The Councilors reported good activity among the county societies, the Secretary's report showed that more new members had been re-

ceived during the year than in the previous year and the Treasurer's report recorded total assets of over \$17,000, a sum more than double the amount in the treasury at the last annual meeting.

The Council recommended to the House of Delegates that provision be made for postgraduate extension service under the direction of the Executive Committee and that a budget system be adopted in the handling of the finances of the Association. All these recommendations were adopted by the House of Delegates and steps will soon be taken by the Executive Committee to inaugurate the postgraduate extension work through which members in the country districts will have opportunity to hear groups of speakers on appropriate subjects, the expenses of these speakers to be paid by the State Association wherever necessary.

The visits of the President and the Secretary to councilor districts within the past year were commended and the Council recommended that visits by these officers be continued during the coming year.

The Committee on Revision of the Constitution and By-Laws introduced a model constitution and by-laws prepared by a special committee of the House of Delegates of the American Medical Association and approved by that body for adoption by constituent state associations. This model has been prepared for the purpose of making the organic laws of the constituent associations as uniform as possible and to be in thorough harmony with the constitution and by-laws of the parent association. Action upon the adoption of the new constitution and by-laws can be taken at the 1927 session. Some amendments to the present constitution and by-laws were also introduced by delegates from the Saint Louis Medical Society which were referred to the Committee on Constitution and By-Laws and will be considered by that body in conjunction with the model form to be acted upon next year.

The election of officers is always an interesting event at the annual session and this year was no exception. For President the House elected, by unanimous vote, Dr. Wm. H. Breuer, of St. James. No other candidate was offered in opposition to his name. The choice was exceedingly popular for Dr. Breuer is known throughout the length and breadth of the state as one who has given himself to the up-building of the organization without thought of his own convenience or interest, preferring often to step aside, when honors were tendered him that others might be chosen as the standard bearers of our Association. His speech of acceptance was applauded with wholehearted enthusiasm and all of the members feel that under his guidance the Association will make great progress towards its goal of protecting the

health of the people and in conserving the welfare of the reputable medical profession.

Other officers elected are: 1st vice president, G. C. Willson, Nevada; 2nd vice president, R. A. Woolsey, St. Louis; 3rd vice president, F. M. McCallum, Kansas City; 4th vice president, Paul F. Cole, Springfield; 5th vice president, U. P. Haw, Benton; secretary-editor, E. J. Goodwin, St. Louis (re-elected); treasurer, G. W. Hawkins, Salisbury (re-elected). Councilors: 14th District, C. T. Ryland, Lexington (re-elected); 16th District, T. B. M. Craig, Nevada (re-elected); 17th District, Guy Titsworth, Sedalia (re-elected); 18th District, W. L. Allee, Eldon, (re-elected); 20th District, W. C. Gayler, St. Louis; 23rd District, Chas. W. Brown, Campbell; 24th District, T. W. Cotton, Van Buren (re-elected); 26th District, J. A. McComb, Lebanon; 27th District, J. C. B. Davis, Willow Springs (re-elected); 28th District, T. O. Klingner, Springfield. Delegates to the American Medical Association: G. Wilse Robinson, Kansas City; alternate, James R. McVay, Kansas City. W. J. Ferguson, Sedalia; alternate, A. J. Campbell, Sedalia. W. T. Elam, St. Joseph; alternate, H. L. Kerr, Crane.

In selecting the place for the next annual meeting, Sedalia had a monopoly of the field when Dr. A. J. Campbell invited the Association to meet in that city. It has been a good many years since the Association met in Sedalia, the last session in that city being held in 1912 under the presidency of the late Dr. Funkhouser. There is a project on foot to erect a new hotel with modern equipment at Sedalia which, it is hoped, will be finished in time for our annual session.

SAFEGUARDING THE HEALTH OF THE PEOPLE

The rapid development of the science of medicine, especially in the field of preventive medicine during the past ten years, has aroused in the public mind a new conception of the value of good health and the possibility of attaining it and retaining it by the observation of certain well-established rules. This is particularly true in connection with contagious diseases. Few people nowadays defy the warnings of health and medical authorities against exposing themselves to contagion and the doctrine of preventing diseases by vaccination is rapidly fastening itself firmly upon right-thinking people. Only a limited set of persons now doubt the efficacy of vaccination against smallpox, typhoid fever and diphtheria, and none dare question the triumph of preventive medicine over yellow fever and cholera both of which have been practically annihilated. These are but a few of the achievements of medicine

as represented by the members of the organized medical associations affiliated with the American Medical Association and they deal directly and intimately with the preservation of life and the prevention of sickness.

There is another phase of guarding the health of the people not so easily demonstrated and not so readily comprehended by the non-medical mind, and that is the guarding of the portals of entry into the medical profession so that none but qualified, reputable, capable and honest applicants shall be given diplomas by medical schools or given licenses to practice by the properly constituted officials of the state.

Missouri has not yet wholly cast aside the mantle of shame thrust upon her by the operations of the medical diploma mill, because the offending schools are still operating. It is true that a special commissioner, after having heard evidence of the operations of these schools, the St. Louis College of Physicians and Surgeons and the Kansas City College of Medicine and Surgery, has recommended to the Supreme Court that their charters be revoked for violations of their charter provisions and not until those charters have been revoked can we feel that our skirts have been fairly cleaned of the smirch that has befouled us for so many years. While it is true that the State Board of Health does not now permit so-called graduates from these two schools to appear before it for examination for licenses and therefore is guarding the portals with better diligence than was possible before these schools could be legally classed as nonreputable, there remains another phase of protecting the health of the people, the responsibility of which rests heavily upon the State Board of Health—the revocation of licenses of those who obtained their licenses through fraud and by other acts that prove them unworthy to practice the healing art.

In his presidential address at our meeting last month, Dr. E. P. North called attention to a condition that he characterized as unfortunate in that the board had not proceeded with the trial for the revocation of the license of "an individual who is already charged by the board after all legal technicalities enjoining the board from proceeding with the trial had been removed." Undoubtedly, Dr. North had in mind the gross offender, Dr. R. B. Horton, now practicing in Kansas City, whose record of deception in obtaining his own license, and fraud and trickery in placing unworthy applicants before our board, is probably unsurpassed.

We have no knowledge of the reasons why the board has thus far failed to proceed with the trial of Horton and we assume that those reasons are satisfactory to all members of the board. The fact remains, however, that the law is daily being flouted as long as Horton continues to practice unmolested by the board

and the people in his community are being deceived as to his qualifications for the intelligent practice of medicine.

The records show that Horton falsified his statement to the State Board of Health concerning his high school education and that he never was a student in any high school; that the Kansas City College of Medicine and Surgery from which he received his diploma was involved in the diploma mill scandal, and that he solicited and accepted money from persons not legally qualified to take the examination, and that persons not qualified to appear were taking the examinations with Horton in the room assisting them; that he was indicted by the Grand Jury at Kansas City for perjury, but escaped punishment on a technicality.

We might also remind the board that one Ralph A. Voigt still enjoys the privilege of practicing medicine in Missouri under a license granted by our state board notwithstanding the exposure of his connection with the medical diploma mill and the sale of medical diplomas.

In passing, we might inquire what circumstance has transpired causing the board to disobey the statute requiring them to re-organize and elect officers at the meeting in January of each year. If such meeting were held and new officers were elected as stipulated in the statute, our members have received no inkling of the fact. If the meeting was not held and the provisions of the statute not fulfilled, are the actions of the board since that date entirely legal and safe against attack in the courts?

Every member of our Association is fully in accord with the sentiment expressed by our retiring president, Dr. Emmett P. North, when he said that the medical profession would "back up the board with every force at our command when the board acts in accordance with the provisions of the law under which they are created." All the laws in Christendom will avail nothing, however, unless the board of health exercises its powers and discharges its duty to the people promptly, unselfishly, courageously and legally.

KANSAS CITY PUBLIC HEALTH INSTITUTE

Under the auspices of the Health Conservation Association there will be a Kansas City Public Health Institute, consisting of at least ten sessions upon Tuesday and Friday evenings beginning about June 15.

The purpose of this Institute is to develop public speakers for public health and allied subjects. The graduates of this course will be the Speakers' Bureau of the Health Conservation

Association and probably the Jackson County Medical Society.

The Publicity Committee of the Health Conservation Association are responsible for the success of this new venture. Mrs. Ettella L. Kelly is the executive secretary with offices at the Health Conservation Association, 420 Hall Building.

The scope of this Institute's activities includes material of public interest in tuberculosis, dental hygiene, mental hygiene, housing, social hygiene, cancer control, milk and water supply, prevention of blindness and deafness, hospitalization, social service, clinics and periodic health examinations, and the various organizations of Kansas City which are interested in these subjects will be invited to support and participate in the Kansas City Public Health Institute.

The Health Director of Kansas City, Dr. E. W. Cavaness, is lending great support to this movement. Among the guest-lecturers at the course will be the following:

Dr. John W. Dodson, Chairman of the Committee upon Public Health Education of the American Medical Association.

Dr. Herman N. Bundesen, Health Commissioner of Chicago, a great propagandist for public health and originator of various methods to interest the public in their own continued well-being.

Miss B. Carroll Kellar, Executive Secretary, Illinois Medical Society. Miss Kellar made a survey of the medical situation in Chicago several years ago and is rapidly achieving national fame as an organizer of Public Health Speakers' Bureaus.

Dr. Charles Emerson, Dean of the Medical Department, University of Indiana, will be invited to participate upon the subject of "Periodic Health Examination by the Family Physician."

Dr. Iago Galdston, New York Tuberculosis Society, author of a Health Speakers' Handbook, will be secured to conduct classes in the technique of public speaking. Local Kansas City preachers, singers and lecturers will assist in this practical voice development.

Dr. M. P. Ravenel, University of Missouri, will be an invited guest.

The local Kansas City faculty is being developed from the members of the Jackson County Medical Society and other authoritative sources. The curriculum is about ready for publication and is thorough and comprehensive of the above related subjects.

Those eligible for matriculation in the Kansas City Public Health Institute include members of the Jackson County Medical Society and other organizations whose ambitions de-

mand the development of public opinion and the dissemination of worth while information and facts to the public. Out-of-town applicants will be accommodated if circumstances permit.

The number of matriculates will be limited to 50. There will be a fee of \$10 for the course, payable in advance. A practical test will be given each participant after the course and certificates awarded. All applications should be sent to Mrs. Ettella L. Kelly, 420 Hall Building, with check.

THE NEW LINCOLN AND LEE UNIVERSITY AT KANSAS CITY

A campaign is now under way to raise \$5,000,000 for a new university to be located in Kansas City. It will be known as the Lincoln and Lee University, and one of the first departments to be established will be the medical department.

The movement is being backed largely by the Methodists, one-half of the membership of the board being composed of Methodists, while the remainder consists of representatives of other denominations. So the enterprise will not only appeal to those of the Methodist faith, but to all who are interested in the prospect of a college with a religious atmosphere and environment. Since Kansas City has long needed a school for higher education, and particularly a Class A medical school, and since many have dreamed of such a school, the project is meeting with enthusiasm on all sides.

According to present plans, the campaign for large donors will continue throughout the spring, ceasing during the summer months. The general campaign will then be started in the fall.

The board of trustees contemplates the breaking of ground for the new university in the fall, and the definite beginning of class work one year thence.

Bishop E. L. Waldorf, head of the Kansas City area of the Methodist Episcopal church, is president of the board of trustees.

MUST HAVE LICENSE BEFORE PRACTICING

Attorney-General N. T. Gentry has given an opinion to Mr. J. T. Muench, City Counselor of St. Louis, stating that a physician not licensed in Missouri, although the physician had served in the United States Public Health Service, cannot act as Hospital Commissioner of the city of St. Louis or director of medical or tuberculous dispensaries, without first being examined by the State Board of Health as to his qualifications and obtaining a license to

practice. The ruling was made to establish the right of Dr. R. A. Gunter, head of the Veterans' Bureau at St. Louis to accept the appointment of Tuberculosis Controller of St. Louis.

This opinion removes all doubt as to the right of a person to practice in Missouri without a license, even though his practice is limited to state, municipal, or county service on a salary basis. Physicians in the service of the United States government are exempted by statute while they are serving in their official capacity.

CRIME AND DELINQUENCY ARE MENTAL HYGIENE PROBLEMS

The National Committee for Mental Hygiene has recently completed an intensive study of the mental health problems of Staten Island. As there is a startling uniformity in the percentages found by these studies in widely separated communities in America the following excerpts will prove interesting to us in Missouri:

One in every 73 children passed through the Children's Court of Staten Island during the period of a year; one in every 167 persons served time in the county jail; one out of every 332 residents of the Borough was a patient in a state hospital for mental diseases; one in every 10 school children was found to need the help of a mental-health service for some form of mental, nervous, physical, emotional, personality, educational, or social difficulty. "These are the figures, vital statistics in every sense of the word, that we estimate," says the report, "as a result of an intensive study of the social problems on the Island arising from the presence of mental abnormality of various kinds and degrees."

Abnormal mental conditions were found among two-thirds of the 44 county jail prisoners studied; and most of the group of 100 juvenile delinquents exhibited more or less serious mental, physical or personality defects. Of 2,340 children studied in the public schools, 3.6 per cent. were found to be feeble-minded; 9.2 per cent. borderline mental defectives; and 16.9 per cent. dullards.

The economic significance of the various forms of abnormality found among the school children of the Borough is further observed by the National Committee for Mental Hygiene in the fact that there are now approximately 400 adult residents of Staten Island in New York state hospitals with mental diseases that began to develop, for the most part, when they were children, and when these conditions could have been largely prevented. Each patient is costing about \$400 a year to maintain, to say nothing of the much greater loss from economic unproductiveness. All this because of the lack of mental hygiene organization.

The best mechanism for providing such facilities, the Committee holds, is the mental hygiene clinic, in which the psychiatrist, the psychologist, and the psychiatric social worker join in making careful and thorough medical, mental, emotional, educational and social study, diagnosis and treatment.

"Crime and delinquency," the Committee believes, "are largely mental hygiene problems and require the attention of the mental clinic just as mental and nervous disorders do. The studies made of juvenile and adult offenders show unmistakably what an excellent opportunity the clinic affords to help un-

social and maladjusted individuals in their mental and social reconstruction. They point, moreover, to the preventive work that would have been possible had the significance of their unsocial tendencies been recognized in early life. The nursery and kindergarten studies show that even very young children develop harmful mental and emotional habits and personality difficulties that have everything to do with the disorders and problems of youth and maturity and must be corrected early to avoid later serious trouble.

THE GOLF TOURNAMENT

The Annual Golf Tournament of the Missouri State Medical Association was held at the North Hills Country Club, St. Louis, on Monday, May 17. There were about fifty contestants and all of them played eighteen holes. A banquet was served at the Club at 7 p. m. and prizes were awarded to the winners who numbered ten. They were as follows.

LOW GROSS

Fred Bailey, St. Louis	-	-	76
Morris H. Clark, Kansas City	-	-	79
S. Stanley Burns, St. Louis	-	-	79

LOW NET

		GROSS	NET
W. L. Kenney, St. Joseph	-	83	66
W. B. Yost, St. Louis	-	87	67

BLIND BOGEY

E. F. McCarthy, St. Louis	-	-	80
R. B. H. Gradwohl, St. Louis	-	-	80
Choice score nine holes, E. R. Hornback,	35		

Paul Y. Tupper, J. Alden and Fred Woodruff won the prizes for dignity of form, honesty of score and assiduous preparation, respectively. It is regretted that these columns cannot print the post-prandial orations, but the fuse blew out and the static became so confusing that only the president remembers them and he won't squeal.

Dr. W. A. Clark, of Jefferson City, was elected president and Dr. A. J. Welch, of Kansas City, was elected secretary-treasurer for 1927.

Dr. Bailey, retiring president of the club, suggests that when possible the Tournament date should be fixed at a time not conflicting with the House of Delegates meeting or the scientific meetings, and that there should be a fee of not less than fifty cents per member collected each year for deposit in the treasury to defray expenses and later establish trophies for perpetual competition.

NEWS NOTES

Dr. C. H. Wallace, of St. Joseph, has filed as a candidate for State Representative from

Buchanan County in the 54th General Assembly.

Dr. Isaac N. Parrish, Cowgill, Mo., has accepted the appointment as physician for Indian Schools at Colony, Oklahoma, and has moved to that city.

Mrs. J. F. Shoemaker, wife of one of the members of the St. Louis Medical Society, has donated \$5,000 toward the completion of the new auditorium.

Dr. Herman L. Mantz, Kansas City, has been appointed superintendent of the Leeds Tuberculosis Sanatorium, a division of the Health Department of Kansas City.

Dr. and Mrs. Jabez N. Jackson were guests of honor at a reception given by the Jackson County Medical Society and the Women's Auxiliary at the residence of Dr. and Mrs. G. Wilse Robinson on May 8.

Dr. B. Brouwer, of Amsterdam, Holland, Professor of Neurology in the University of Amsterdam, was the guest of the St. Louis Medical Society May 11 and gave an address on the "Pathology of Sensibility."

Dr. Cecil R. Wayman, St. Louis, was appointed Tuberculosis Controller of St. Louis, April 1, to succeed Dr. H. I. Spector. Dr. Wayman was previously surgeon in the United States Veterans' Bureau at St. Louis.

Dr. H. S. McKay, St. Louis, read a paper at the meeting of the Baltimore and Ohio Railway Surgeons' Association, Chicago, May 12-15, on "Should the Cord be Placed External to the Aponeurosis in Inguinal Hernia Operation? Personal Observations in Sixty Cases."

The establishment of the John H. Bothwell Hospital Trust through which Sedalia and Pettis County will benefit, has been completed. By this agreement, Mr. Bothwell donates funds for the erection of a modern hospital at Sedalia, and a further sum to promote the erection of a new hotel in that city.

Two members of the St. Louis Medical Society died very suddenly recently. Dr. William D. Davis was found dead in his office at 10:50 p. m. on May 30, apparently from natural causes. Dr. Jesse Leland Brogher suffered an attack of appendicitis and died shortly after the operation on April 17.

Dr. G. W. MacKenzie, of Philadelphia, will conduct his fifth European tour for a summer

course in ophthalmology and otolaryngology. Among those who will make the tour this year is Dr. W. G. Patton, of St. Louis. The party will sail on the steamship S. S. "Veendam" of the Hamburg-American line on June 12. Dr. Patton will spend three months in Europe visiting other medical centers after the course has been completed at Vienna.

The National Board of Medical Examiners will hold its next examination in Parts I and II on June 21, 22, and 23. This will be held in the various Class A medical schools of the country provided there are a sufficient number of candidates to warrant holding the examination. In cities having more than one medical school the examination will be held at only one point. Applications for the examination should be forwarded immediately to the office of the National Board, 1600 Walnut Street, Philadelphia.

Dr. Jabez N. Jackson, Kansas City, President-Elect of the American Medical Association, was honored by Park College, Parkville, Missouri, when the president of the institution, Dr. F. W. Hawley, conferred the honorary degree of Doctor of Science upon him, May 25. The ceremony took place on the occasion of the forty-seventh commencement exercises of the college. Park College has conferred such degree upon only one other man, Dr. E. C. Rosenow, of the Mayo Clinic, Rochester, Minnesota.

Dr. Richard L. Sutton, of Kansas City, received the honorary degree of Doctor of Science from the Washburn College, Topeka, Kansas, on June 2. In conferring the degree upon Dr. Sutton, President Parley P. Womer, of Washburn College, said the honor was conferred upon Dr. Sutton in recognition of his achievements as a scientist, an author, a teacher and an anthropologist. Dr. Sutton was similarly honored by the University of Missouri when that institution conferred the honorary degree of Doctor of Laws upon him in April, 1922.

The women physician members of the St. Louis Medical Society, numbering about 25, have organized a club and hold meetings monthly. They have a dinner meeting on Tuesday of each month and then attend the St. Louis Medical Society in a body. During the annual meeting of the Missouri State Medical Association in St. Louis the Club entertained the women physicians from other parts of the state who are members of the State Association. Dr. Frances Bishop, of St. Louis, is anxious to have a list of the women physicians of the state and would appreciate names being sent to her.

The United States Civil Service Commission announces open competitive examination for junior medical officer (interne). Applications will be rated as received until August 31. The examination is to fill vacancies in Veterans' Bureau Hospitals and Diagnostic Centers, and in positions requiring similar qualifications. The entrance salary is \$1,860 to \$2,400 a year without allowances, or \$1,260 to \$1,860 a year with quarters, subsistence and laundry. Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

On June 1, the St. Louis Medical Society held its final meeting in the old building at 3525 Pine Street. The offices and the library will be moved to the new building on Lindell Boulevard in July. At this meeting, Dr. A. R. Kieffer, who was instrumental in starting the movement for the construction of the building on the Pine Street property, related the details of the movement and the construction of the auditorium. Mr. Frank Schwarz, of the St. Louis Zoological Society, gave an interesting talk on snakes, illustrated by four astonishingly interesting reels which took Dr. Dewar, of the Washington, D. C. Zoological Society, fifteen years to make. Moving pictures illustrating the scenery, animal life, and life among the Indians of Wyoming and showing the opportunities afforded for hunting, fishing and outdoor life in this wonderful state were also shown.

A decision by the Supreme Court of Illinois relating to chiropractic has brought out a new answer to the claims of chiropractors and practitioners of similar methods. The defendants in the case argued that practice of chiropractic was "a useful and harmless calling which cannot be regulated by the state." This claim was declared to be so entirely without merit that any discussion of it was unnecessary. The decision went on to state, however, that "if a chiropractor can, by manipulation, move a dislocated vertebra so that the pressure on a nerve can be relieved and paralysis cured, he can by the same process dislocate a vertebra and cause a paralyzed condition. Any method of treating human ailments which, when practiced skillfully, can restore a diseased human body to health is capable of doing great harm when practiced without care or skill. A method of treating human ailments cannot be both useful and harmless. If it is sufficiently efficacious to

be useful, it is at the same time capable of producing harmful results." The chiropractor, no less than the physician or any one else who is to treat the sick, needs to have a sufficient training in the fundamentals of medicine so that he will know at least when his manipulation may be harmful.—*Journ. A. M. A.*

The United States Post Office Department has denied use of the mails, according to press dispatches, to several medical concerns located in Kansas City who have been conducting nation wide campaigns for the sale of alleged "fake remedies" through the mails. According to the *Kansas City Star*, the following persons were indicted on the charge of using the mails to defraud:

Harold Melton Stunz, Bessie M. Stunz, his wife; Conrad Stunz, his father; Ray M. Stunz and W. D. Stunz, brothers of H. M. Stunz; Ward H. Webb, Warren W. Burgess.

Linn D. Johnson, the third member of the Burgess-Johnson-Webb Corporation, now a resident of Los Angeles, is said to be on the way to Kansas City by motor car. He is expected to make his entry of appearance and give bond.

The indictment involving the five members of the Stunz family contains eighteen counts. The five are named in government income tax returns as the recipients of large profits from the operations of the Melton Laboratories, the Renex Company and the Hiobin Company.

The Burgess-Johnson-Webb Corporation is alleged to have sold, through the operation of about thirty-five different companies, most of them said to be fictitious, remedies which brought the three persons hundreds of thousands of dollars. Virtually all of the remedies sold by the indicted persons were found by chemists of the department of agriculture to be worthless for the purposes for which they were sold. Sufferers throughout the country were alleged victims of the indicted persons.

OBITUARY

WILLIAM FRICK, M.D.

Dr. William Frick, Kansas City, an honor member of the Society, died at his home, 7257 Washington Street, February 20, after a long illness, following a severe attack of flu-pneumonia in 1922.

Dr. Frick spent last year in California hoping to regain his strength and health, returning last October little benefited.

Born on a farm near Liberty, Missouri, April 7, 1857, Dr. Frick received his Bachelor of Arts

degree from Wesleyan College, Warrenton, Missouri, and his medical degree from the St. Louis College of Medicine in 1884. Locating in Kansas City the following year, he soon took up the specialty of dermatology, and was widely known throughout the country.

Dr. Frick was elected to membership of this Society in 1885 and an honor member in 1922. He served as president in 1901-2 and several terms upon the executive council, and was a member of the Missouri State Medical Association and a Fellow of the American Medical Association. He was one of the oldest members of the staff of St. Joseph's Hospital and was active on the teaching staff of the Kansas City Medical College.

Besides his activities in medical circles, Dr. Frick was interested in various organizations in Kansas City, serving for many years as a trustee of the Grand Avenue Methodist Church, a charter member of the Ivanhoe Masonic Lodge and a member of the Triangle Club.

Dr. Frick is survived by his widow, a son, Dr. J. Paul Frick, living at the home address, a brother, John H. Frick, at Warrenton, Missouri, and two sisters, to whom we extend our deepest sympathy.—*Jackson County Medical Society Bulletin.*

HAROLD JERARD, M.D.

Dr. Harold Jerard, of Pleasant Hill, Cass County, died on March 14, 1926. He was born September 6, 1852, on a farm near Lees Summit, Jackson County, Missouri, the son of Henry and Sarah Jerard. His early life was spent in Jackson County and at the age of 9 years his parents moved to Cass County near Harrisonville where he lived until he entered the Missouri State University, graduating from the School of Medicine there in June, 1875. He was married March 1, 1876, to Mary Francis Ferril, of Harrisonville, Missouri. They had three children, Harold L., Hubert F., and Junietta S. Mrs. Jerard passed away July 9, 1925.

Dr. Jerard began practicing medicine at Burdette, Bates County, Missouri, where he staid for about one year after which he moved to East Lynne, Cass County, where he lived until March, 1891, at which time he moved to Pleasant Hill where he lived until his death.

Dr. Jerard was a charter member of the Cass County Medical Society and was an active member until his death. He was a Fellow of the American Medical Association.

RODNEY D. RAMEY, M.D.

Dr. Rodney D. Ramey, pioneer physician of Cass County, died in his office at Garden City, Tuesday morning, April 6, 1926, of apoplexy.

His funeral was held Thursday morning, April 8, from the First Baptist Church of Garden City, the services conducted by the pastor, Rev. Robert H. Baker. Burial was in the Garden City Cemetery.

Dr. Ramey was one of the prominent and widely known professional men of Cass County. He was born in Pettis County, Missouri, November 4, 1854, the son of David Stout and Eliza Guinn (Rice) Ramey. He is the last of his family, three sisters and a brother having died in 1925. He is survived by his wife and one daughter, Mrs. G. O. Rocky, of Kansas City, Missouri.

Dr. Ramey was well educated, having entered the Warrensburg State Normal after his elementary training in Pettis County, following which he entered the teaching profession and taught school for four years in both Cass and Pettis counties. He chose the profession of medicine early in his life and at the age of 27 began practicing in Dayton, Cass County, where he practiced until 1899 when he moved to Garden City. He was a graduate of the Missouri Medical College in the class of 1883.

He was married April 5, 1883, to Della May Oglesby, daughter of Pleasant and Sarah C. Oglesby, of Knobnoster, Missouri. He was fraternally affiliated with the Ancient Free and Accepted Masons, Independent Order of Odd Fellows, Yoeman, Modern Woodmen of America and the Royal Neighbors. He was a member of the American Medical Association, Missouri State Medical Association, Cass County Medical Society, the Southwest Medical Association and a life member of the Red Cross Medical Association.

Dr. Ramey built up a large practice and no physician was more widely known and few physicians in Cass County have practiced longer than he, the late Dr. Jerard, of Pleasant Hill, and Dr. David Griffith, of Creighton, being the two exceptions. He always took an active interest in his profession and was ethical in every way. He served as president of the Cass County Medical Society in 1922, 1923 and 1924.

At the time he was stricken Dr. Ramey called twice to Mr. R. H. Patton, his next door neighbor, who ran to his assistance. When Mr. Patton got to the front door of the office Dr. Ramey was standing in his operating room at the rear of the building, but before he could be reached his body had slumped to a table and then to the floor. Dr. George W. Griffith was the first physician called and he did what could be done but Dr. Ramey passed away in about ten minutes. Dr. Ellis was also called but arrived after Dr. Ramey had died. Dr. Ramey had been in exceptionally good health for the last year or so but it is said that he believed he

would go in just the way he did and even told friends of his belief. Three or four years ago Dr. Ramey was seriously ill for several months and then it was thought that he would not recover, but he did and was apparently healthy up to his death.

Dr. Ramey's devotion to the profession he chose early in his youth, and his fine character, marked him among a large circle of friends and acquaintances. His death will be sincerely mourned by all who knew him.

CORRESPONDENCE

IN ACTIVE PRACTICE 68 YEARS

When we published in our May issue an item concerning the number of years of practice of Dr. A. W. Davidson, of Poplar Bluff, and Dr. O. E. Kendall, of Sikeston, we suspected that we might hear from one or two other "old timers" who have been in practice even longer than Dr. Kendall. Now comes a letter from Dr. J. D. Skidmore, of Memphis, who is 90 years old and has been practicing 68 years. A portion of his letter follows:

"I began reading and practice of medicine under I. R. Asbury, M.D., in 1856. Attended the St. Louis Medical College for the session of 1856-7 and 1857-8, and graduated therefrom in March, 1858. Have been actively engaged in the work continuously and still prescribe once in a while for old friends. I was born November 18, 1836, so you can figure it out."

Dr. Skidmore is now coroner of Scotland County, and lately held a coroner's inquest.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

Camden County Medical Society, November 23, 1925.

Howard County Medical Society, January 8, 1926.

Ralls County Medical Society, February 27, 1926.

Schuyler County Medical Society, March 25, 1926.

Franklin County Medical Society, March 29, 1926.

Monroe County Medical Society, April 14, 1926.

Howell-Oregon Medical Society, April 7, 1926.

Atchison County Medical Society, April 26, 1926.

Saline County Medical Society, May 15, 1926.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its first meeting of the year, in Butler, April 29, at 2:00 p. m. There were present Drs. Robinson and Luter, of

Adrian; Drs. Allen and Insley, of Rich Hill; Dr. Rhoades, of Foster; our Councilor, Dr. T. B. M. Craig, of Nevada; Dr. Althen, of Sheldon; Dr. Hartwell, of Amsterdam; and Drs. Foster, Crabtree, Newlon, Chastain, Lusk, and Thiele, of Butler. Dr. Eugene P. Hamilton and Dr. Buford G. Hamilton, of Kansas City, Missouri, were present as guests.

The meeting was called to order by the president, Dr. E. E. Robinson. After a few preliminary remarks the following business was transacted: Dr. George H. Thiele, of Butler, was appointed secretary-treasurer for the coming year, taking the place of Dr. Gerald Bates who recently removed from Adrian to Independence, Kansas. Dr. Craig was called upon to discuss the situation of attendance at our meetings. Dr. Craig's remarks were well received and we were glad of the opportunity of having him with us. Dr. Carter W. Luter, of Adrian, and Dr. A. B. Freeman, of Rockville, were elected to membership. We are glad to welcome them as new members. Dr. Claude J. Allen, of Rich Hill, and Dr. John S. Newlon, of Butler, were elected delegate and alternate respectively to the State Society Meeting at St. Louis in May.

The first number on the program was a talk by Dr. E. E. Robinson upon "Things Our County Society Should Do." Dr. Robinson stressed the necessity of cooperation among the members of the society, especially as regards the collection of accounts, and practice for those who are able to pay a physician but never do pay. Dr. Robinson's address brought forth much discussion and the matter was placed in the hands of a committee composed of Drs. Chastain, Luter, Insley, and Allen, this committee is to report at our next meeting.

Dr. Robinson then introduced Dr. Eugene Hamilton, of Kansas City, who lectured on the subject of "Intestinal Obstruction, Its Diagnosis and Treatment." Dr. Hamilton illustrated his lecture with lantern slides and all were impressed by significant statements he made.

The concluding number of the program was an address on "The Diagnosis and Treatment of Common Obstetrical Problems," by Dr. Buford Hamilton, of Kansas City. Dr. Hamilton's address led to a great deal of discussion and to many interesting case reports by various members.

No further business appearing, the meeting was closed with a vote of thanks to Doctors Hamilton and an invitation to them to meet with us again.

GEO. H. THIELE, Sec'y.-Treas.

CARTER-SHANNON COUNTY MEDICAL SOCIETY

The Carter-Shannon Medical Society held its meeting with Dr. W. T. Eudy, of West Eminence, Missouri, on April 15. The first form of business was to elect Dr. Frank Hyde to act as president pro tem of the meeting, the president being absent. The regular form of business was transacted and the election of officers was in order.

Dr. C. C. Sheets, of Ellsinore, was elected president; Dr. W. T. Eudy, of West Eminence, vice president; Dr. H. L. Meador, of Van Buren, secretary and treasurer. The board of censors were elected as follows: Dr. T. W. Cotton for one year; Dr. Frank Hyde for two years; Dr. A. Johnston for three years.

Motion was made and carried that three members shall constitute a quorum. Motion was made that

the society shall hold quarterly meetings and shall be held on Tuesday after the first Monday in January, April, July and October. Motion was made that the election of officers shall be at the first meeting of each year. Motion was made that this society shall donate ten dollars to the support of the passage of the new criminal law. Motion was made to ask the Secretary of the Missouri State Medical Association to furnish Carter-Shannon Medical Society with a charter. Motion made that the admission fee of new members shall be one dollar. Motion made that the July meeting be held at Grandin, on July 6. Motion made that Dr. A. Johnston be appointed to arrange the program for the July meeting. Motion made to pay Secretary of the Carter-Shannon Medical Society three dollars and eighty cents for postage and telephone messages.

The meeting took up the by-laws that were laid out by the American Medical Association for county medical societies, and were read by Dr. T. W. Cotton and adopted as written by the American Medical Association, with but few changes.

Dr. W. T. Eudy had two very interesting cases for us. One case was that of a young man, about twenty-four years, with aortic insufficiency of about eight months standing. This man had had some trouble before with his heart but last October he received a gunshot wound in the left leg and foot which was followed with quite an infection, and later the development of the trouble with the aortic valve. The second case, a young man of twenty-five years, who was brought before us with femoral aneurism caused by a knife wound inflicted when nine years of age. This man says that he is never bothered and only found this by accident. He has no pains, no swellings and works hard every day. He plays basket ball and does anything he wishes. The above cases were very much appreciated by the members present.

H. L. MEADOR, Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its regular meeting in Liberty, Thursday evening, April 29. Thirty members and wives sat down to a sumptuous dinner at 6:30, in the splendid new high school building, served by the high school girls of the department of domestic science; Professor Campbell, Superintendent of the Liberty Schools and his estimable wife sat at dinner with us, guests of Dr. F. H. Matthews. The Society spoke its pleasure at the reception given, to which Prof. Campbell responded in a speech ringing with welcome and assurance of co-operation. After dinner, we visited various rooms of the splendid school building, recently erected at a cost of over \$250,000. Not only Liberty but Clay County indulges just pride in the educational facilities of our famous county seat.

The Ladies' Auxiliary held an interesting meeting, while the scientific section listened to a lecture by Dr. Donald Black, of Kansas City, on "The Physiology and its Relation to the Pathology of the Kidney." Dr. Black's message was fraught with important facts, driven home by illustrations on the screen, to the minutest detail. Many questions were asked and much discussion followed the lecture, bringing out case reports and clinical experiences. The meeting ranked with our very best—we have no mediocre gatherings in our Society. As a fitting climax, eight members paid dues for 1926.

J. J. GAINES, Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society held its regular monthly meeting in the Farmers Bank Building in Higginsville, Tuesday afternoon, April 20. The meeting was called to order by the president, Dr. Lewis Carthage, Jr. The minutes of the last meeting were read and approved. The following members were present: Doctors Cope, Chalkley, Martin, Webb, Braecklein, Davis, Butler, Carthrae, Jr., Shryman, Edmund Lissack.

The Clinical Case Record of the Massachusetts General Hospital was presented and discussed.

Dr. Cope gave a well prepared and timely talk on "Finances." His talk created much discussion pro and con.

Dr. Chalkley prepared an excellent paper on "Immunity." He presented it well. A lively discussion followed. Dr. Braecklein made the motion that this paper be published.

A word of appreciation and thanks was tendered the society by Dr. Chalkley for the honor bestowed by the motion.

The following motions were made:

1. Motion was made by Dr. Braecklein and seconded that "Dr. Chalkley's paper on 'Immunity' be sent to Dr. Goodwin for publication in the Missouri State Medical Association Journal." Approved by all members present.

2. The following motion was made by Dr. Braecklein and seconded by Dr. Webb: "That we as physicians of Lafayette County think that the time required nowadays for a medical education is too long and too expensive and that we recommend that the time be reduced to 3 years in a medical school (instead of 4) and 1 year in a hospital as an intern." The vote of the members present was 3 for the adoption and 5 against this motion. Failed.

3. A motion was made by Dr. Butler and seconded by Dr. Koppenbrink "That the president of the Lafayette County Medical Society appoint a committee of 3 physicians, including himself, to talk with the County Court relative to agreeing on some manner whereby the court would aid the physicians of the county financially, in treating the poor and destitute of the county." Approved by all members present. The committee appointed by the President consists of Doctors Chalkley, Butler and Ryland.

There being no further business the meeting adjourned. Next meeting to be held in Odessa on the eleventh of May.

Meeting of May 11

The Lafayette County Medical Society held its regular monthly meeting in the Masonic Hall in Odessa, Tuesday afternoon, May 11. The meeting was called to order by the president, Dr. Lewis Carthrae, Jr. The minutes of the last meeting were read and approved. The following members were present: Doctors Martin, Schooley, Braecklein, Moore, Carthrae, Jr., Liston and Edmund Lissack.

The Clinical Case Record of the Massachusetts General Hospital was presented and the discussion opened by Dr. Liston. Dr. Liston diagnosed the case as one of Diabetes and in his discussion called attention to the value of early diabetic treatment. His remarks on diet and insulin were timely and helpful.

Dr. R. F. Campbell, of Kansas City, was our guest and read a paper on "Diseases of the Eye." His paper treated mainly with the injuries of the eye, was well prepared and well presented. Dr. Campbell gave us many valuable points relative to the treatment of injuries such as occur in general practice.

His paper was discussed by all members present and the Doctor was kept busy answering the various questions presented.

Dr. E. M. Moore was elected delegate to the Missouri State Medical Association meeting to be held in St. Louis, May 17.

It was proposed to have the June meeting in Lexington and to invite the Ray County Society as our guests. This was approved by all present.

There being no other business the society adjourned until June 8.

After the meeting Dr. and Mrs. R. C. Schooley very pleasantly entertained the visiting doctors and their wives.

EDMUND LISSACK, Secretary.

MARION COUNTY MEDICAL SOCIETY

Marion County Medical Society met April 3. The meeting was the first in a long time. Three new members were elected: W. C. O'Neal, Palmyra, by transfer from Lewis County; P. J. Reichmann, Oakwood, by transfer from Cole County; Elliot Rector Motley, Hannibal.

The old officers were re-elected for 1926, the year being so far spent. They are: President, Henry L. Banks, Hannibal; secretary treasurer, Mary S. Ross, Hannibal; delegate to the State Association meeting, John J. Bourn, Hannibal; alternate, Joel W. Hardesty, Hannibal; censors, Henry L. Banks (1 yr.), Elmer E. Waldo (2 yrs.), William P. Birney (3 yrs.), all of Hannibal.

M. S. Ross, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met at the court house, Caruthersville, Tuesday, March 9, with Dr. W. H. Denton, President, in the chair. The meeting was called to order at 1:30 p. m., following a 12 o'clock luncheon at the Majestic Hotel. About twenty-five practitioners of the county were in attendance and several visitors from Memphis, Cape Girardeau and other points.

The following members were present: Drs. J. R. McDaniel, J. W. Rhodes, G. O. Hammersley, J. B. Luten, W. H. Denton, J. P. Vickrey, T. J. Collins, L. D. Denton, J. R. Pinion, W. S. Petty, G. W. Phipps, J. C. Faris, M. H. Hudgings, J. W. Johnson, W. R. Limbaugh, L. E. Cooper. The visitors were: Drs. P. L. Tipton, A. J. Speer, J. W. Robins, F. R. Atkins. Dr. F. L. Husband, Blytheville, was invited to be in attendance, and the members and visitors regretted that at the time he was confined to his home with a gallbladder infection.

By a unanimous vote, dues were raised to \$12.00.

The first number was a very interesting address by Dr. Eugene Rosamond, of Memphis, on the subject, "Three Months Colic." An excellent paper was then read by Dr. Edwin J. Lipscomb, also of Memphis, on "Treatment of Sequelae in Infantile Paralysis." One patient was examined by Dr. Lipscomb and some very instructive suggestions in regard to the treatment of sequelae were brought out by him in the course of his examination and remarks.

A paper on "The Treatment of Fractures" was read by Dr. Henry G. Hill, of Memphis, which was illustrated by stereopticon slides, and two patients were examined by Dr. Hill. This paper was freely discussed by the members as the subject was one in which the general practitioner is always interested. The treatment of fractures is many times a difficult

thing, most particularly in the rural sections where hospital facilities and adequate equipment are unavailable. Many fine points regarding the treatment of injuries were brought out.

Dr. H. L. Cunningham, of Cape Girardeau, read an interesting paper on "Defective Tonsils," which evoked discussion of when to advise the removal of diseased tonsils. This topic was very instructive as many people in this section of the state, especially the school children of the country, are known to be suffering from defective tonsils. This is a condition which prevails to a very considerable degree in our local schools.

Dr. W. S. Petty, County Health Officer, spoke on the activities of the County Health Department and urged the doctors of the county to make more use of the department as there are a great many things the practicing physicians can do to help the department in its work and render a good service to the citizens, along public health lines. At the same time, the health Department, no doubt, can render a valuable service to the doctors in their regular work. The Society went on record as endorsing the activities of the County Health Department.

The following officers were elected for 1926: President, Dr. M. H. Hudgings, Caruthersville; vice president, Dr. J. W. Rhodes, Hayti; secretary, Dr. J. W. Johnson, Hayti.

The next regular meeting will be held Tuesday, April 13, probably at Caruthersville.

J. B. LUTEN, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met at Moberly, in regular session in the Chamber of Commerce Rooms, April 13, 1926. There were 12 members present, namely, G. O. Cuppiadge, C. K. Dutton, P. C. Davis, C. H. Dixon, O. O. Ash, E. W. Shrader, J. Maddox, L. A. Bazan, L. Hunker, L. E. Huber, M. R. Noland, F. L. McCormick.

Dr. Stewart, of Jefferson City, Secretary of the State Board of Health was with us and made a very interesting talk, covering the happenings of the State Board the past few years. He explained the efforts that were being made by the board to get rid of the diploma mills that had been in operation in Kansas City and St. Louis for three or four years. After this talk the regular routine of business was taken up.

The roads being almost impassable, no one from the smaller towns was present.

It being late the scientific part of the program was dispensed with to be taken up again at the next meeting which will be Tuesday, May 11, 1926, at 8:00 p. m. in the Chamber of Commerce Rooms, Moberly.

F. L. McCORMICK, M.D., Secretary.

RAY COUNTY MEDICAL SOCIETY

The Ray County Medical Society met in the assembly room at the court house in Richmond, Mo., March 30.

The following officers were elected for the ensuing year: Grover W. Gaines, Rayville (re-elected); 1st vice president, Luther D. Greene, Richmond; 2d vice president, Elmer T. McGaugh, Richmond; secretary, Robert L. Hamilton, Richmond (re-elected); treasurer, Thomas F. Cook, Richmond (re-elected); delegate to the meeting of the State Association, Robert L. Hamilton, Richmond (re-elected); alternate, Thomas F. Cook, Richmond.

ROBERT L. HAMILTON, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

At the regular session, Tuesday, May 4, at the office of Dr. U. P. Haw, Benton, a fair crowd of enthusiastic fellows were present, usual routine of business was transacted, such as reading minutes and disposing of correspondence, after this the application of Dr. H. M. Kendig, of Sikeston, was read, same having been favorably reported by board of censors, was placed for ballot and Dr. Kendig was elected to membership.

Dr. Sylvester Doggett, the secretary, having moved from the county, to Cape Girardeau, tendered his resignation as secretary of the Society, after some discussion as to legal status of the matter, a motion was adopted tabling the resignation indefinitely and requesting Dr. Doggett to serve to the end of the year.

After the business session, a lively program with some enthusiastic discussion was enjoyed by all.

A paper on typhoid was read by Dr. Cannon. This was short and to the point; just the kind that brings out good discussions based on the actual experience. All present seemed agreed that while parts of Scott County, particularly the sandy portion, is seldom bothered with typhoid fever; other portions of the county, particularly portions of the railroad towns are almost continuously infested with typhoid.

A paper on organized medicine was read by Dr. U. P. Haw, which touched the keynote of a vital subject to all physicians at present time. The paper was well received and enthusiastically discussed and resolutions asking that Dr. Haw bring the subject to the floor of the State Meeting and re-read his paper at the S. E. Mo. Medical, were unanimously adopted.

Dr. Nienstedt gave a case report in which he related a case of primipara with well developed breasts but utterly devoid of nipples.

After this the meeting adjourned to meet again August 3 at the office of Dr. Ashley, Illmo.

DR. SYLVESTER DOGGETT, Secretary.

ST. LOUIS MEDICAL SOCIETY

MEETING OF THE COUNCIL

Meeting of March 10

The meeting was called to order at 8:15 p. m. by the President, Dr. Amand Ravold.

The minutes of the previous meeting, February 10, were read and approved.

Dr. Wm. E. Leighton read the report of the Membership Committee which on motion was adopted and the following elected to membership:

Active—Dr. Harry L. Alexander, Barnes Hospital; Dr. Joseph J. Singer, Robert Koch Hospital.

Junior—Dr. Henry J. Ringo, 611 Metropolitan Building; Dr. John H. Duemler, Lutheran Hospital.

The application of Dr. Wm. G. Patton for membership by transfer from the Bourbon County (Kansas) Medical Society was read for the second time and he was elected to membership.

A letter from the secretary of the Ophthalmic Section requesting the use of the Society's Stationery was read.

It was moved that the Ophthalmic Section be notified that our By-Laws prohibit the Society assuming any expense of the sections. Seconded and carried.

It was moved and seconded that the Society assume its share of the expense of the ceremonies in the dedication of the Beaumont High School. Carried.

Dr. Vogt brought up the matter of the use of the new building by the Dental Society.

It was moved and seconded that the chairman of the House Committee, Dr. Neilson, be instructed to notify the Dental Society that no action could be taken at present.

Dr. John C. Morfit read the report of the Building Committee.

On motion the report was received and the bill for the ninth payment for materials and labor furnished for the building was approved.

It was moved and seconded that it be the consensus of opinion that the alterations suggested by the Building Committee in re: Putting in solid floors over ceiling to make more stack room, are advisable if the Building Committee approves same. Carried.

The matter of space in the Society Building for the new St. Louis Clinics was brought up and it was moved that a committee of three members of the Council be appointed to confer with a committee of the St. Louis Clinics regarding the matter. Seconded and carried.

Drs. Schluter, Unterberg and Ravold were appointed on the committee.

HILLEL UNTERBERG, Secretary pro tem.

MEETING OF THE GENERAL SOCIETY

Meeting of March 23

The meeting was called to order at 8:30 by the president, Dr. Amand Ravold.

The minutes of the previous meeting were read and approved.

The president read a letter from the St. Louis Clinics requesting space in the Society's building for headquarters.

Dr. John C. Morfit moved that the request of the St. Louis Clinics be granted and that they be charged for the actual cost of the expenses incurred by same. Seconded and carried.

Dr. James Moores Ball presented the speaker of the evening, Samuel Ernest Whitnall, Professor McGill, University, Montreal, who read a paper on "Facia, Its Forms, Functions, and Fallacies."

Discussion by Drs. R. J. Terry, A. G. Pohlman, H. A. Harris; Dr. Whitnall, closing.

Meeting of March 30

The meeting was called to order at 8:30 p. m. by the first vice president, Dr. C. A. Vosburgh. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Skin Grafting in Acute Symbplepharon" with demonstration of patient by Dr. James Moores Ball.

Discussion by Drs. N. R. Donnell, B. Y. Alvis; Dr. Ball, closing.

"Fissure in Ano" by Dr. W. R. Rainey. Discussion by Drs. W. C. G. Kirchner, E. C. Funsch, Francis Reder; Dr. Rainey closing.

"Thermal Death-Point of Tumor Tissues" by Dr. William E. Shahan.

Discussion by Dr. E. H. Higbee.

Meeting of April 6, "Military Night"

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

The minutes of the previous meeting were read and approved.

A letter was read from the Health Commissioner, Dr. J. Wilbur Shankland, inviting the members of the Society to attend dedicatory exercises of Jordan

Hall at the St. Louis Training School, Bellefontaine and Hall's Ferry Roads on Friday, April 9, 1926.

The program for the evening consisted of the following:

"Insurrection Days in the Philippines" with lantern slide demonstration by Dr. Clarence Martin.

Dr. Wm. H. Leudde introduced Dr. A. J. McLaughlin who talked on "Observations of a Medical Officer in the Philippines."

Dr. John C. Morfit introduced Col. Wm. A. Wickline who talked on "Observations of a Medical Officer in Hawaii."

"Travel, Study and Observations of a Medical Officer" by Dr. F. G. Abeken.

Discussion by Col. Bingham, Dr. Wm. H. Leudde and Captain Ralph C. Lawder.

Dr. Wm. H. Leudde presented the following resolution which on motion was adopted:

Whereas, the great majority of the members of this Society served in some branch of our country's forces during the World War, and know of our own knowledge of the horrors of armed conflict, and

Whereas, we realize that war may be forced upon our country by the unjust acts of others; and believing that warfare in self-defense and in the cause of liberty is justifiable, and

Whereas, we believe that adequate preparedness is vital in maintaining peace; and that military instruction in schools and colleges materially aids in forming habits and inculcating ideals that make better citizens, and

Whereas, St. Louis has two universities at which Class A Reserve Officers' Training Corps are maintained by the Federal Government, and

Whereas, it is well known by the members of this Society that from time to time our Government's policy with respect to military training in our schools has been the object of attack by a well organized and persisted propaganda of so-called pacifists; that recently these people have succeeded in enlisting in their illy advised or treasonable purposes certain people of our community otherwise of excellent standing, therefore be it

Resolved by the St. Louis Medical Society at its regular weekly meeting assembled:

That knowing war, we abhor it; but realizing that the best prevention of war is adequate preparation for war, we are in hearty accord with the National Defense Act.

That we believe the Reserve Officers' Training Corps in schools and colleges are of great value to the students and the government and merit the continued support of all patriotic Americans; that we are particularly proud of the two fine Corps in this city.

That we believe in the Citizens' Military Training Camps and recommend them as a wonderful opportunity for young men to spend a month in character building play and work, all necessary expenses being borne by the Government.

That we consider the present National Defense policy excellent, but the very minimum consistent with adequate defense from enemies without and within; that we desire to warn patriotic Americans that it is our belief that persons and societies who attack any department of established military defense system do so from a dangerous ignorance of the real situation, or from treasonable motives.

Adjourned to the parlors for refreshments, 10:20 p. m.

Meeting of April 13

The meeting was called to order at 8:30 p. m. by the president Dr. Amand Ravold.

The minutes of the previous meeting were read and approved.

Dr. Morfit moved that the regular order of business be set aside and that the special order of business of the Building Committee be considered. Seconded by Dr. H. A. S. Borck. Carried.

Mr. E. J. Russell, Architect, spoke on the plans of the auditorium.

Dr. Joseph Grindon spoke on the Building Committee's report and moved that the following resolution be adopted:

Resolved, That the St. Louis Medical Society approves and accepts the recommendations of the Council and Building Committee for the acceptance of the plans for the erection of an auditorium complete and ready for occupancy at a cost not to exceed \$170,000, and be it further

Resolved, That the officers of the Society are authorized and directed to borrow, on the credit and security of the St. Louis Medical Society, such sums, not to exceed a total of \$80,000.00, as may be necessary to meet its contract obligations in the erection and equipment of the new buildings, pending the time when the subscriptions and donations shall be sufficient to pay off the indebtedness incurred.

Seconded by Dr. James Moores Ball. Carried.

Dr. Marsh Pitzman objected to the manner in which the resolutions were presented in that no discussion was called for.

Drs. James Moores Ball, Louis H. Behrens and John C. Morfit also spoke on the building project.

The regular scientific program was contributed by the Staff of the St. Louis Children's Hospital and consisted of the following:

"Pneumococcus Peritonitis," by Dr. Malvern B. Clopton.

Discussion by Drs. Marsh Pitzman, Amand Ravold.

"Changes Occurring in the Body as the Result of Vomiting—Value of Blood Examination in the Diagnosis of Various Forms of Intestinal Obstruction" by Dr. Alexis F. Hartmann.

"The Surgical Treatment of Pulmonary Infections in Children" by Dr. Evarts A. Graham.

"The Management of Chorea" by Dr. Hugh McCullough.

Dr. A. H. Hamel presented the following resolution for the Committee on Health and Public Instruction which on motion was adopted:

Whereas, The Psychiatric Clinic, a unit in the Department of Public Welfare of the City of St. Louis is engaged in an analysis of the causes of delinquency and crime, and

Whereas, Its activities embrace broad aspects of mental hygiene work among children, building in them strong and stable traits of character, and

Whereas, The Psychiatric Clinic renders incalculable aid to the Juvenile and Adult Courts of the City of St. Louis in the examination and recommendations for individuals appearing before these tribunals, therefore be it

Resolved, That it is the sense of the St. Louis Medical Society that the Psychiatric Clinic should be maintained as a unit in the Department of Public Welfare to continue its activities in behalf of the growing generation of children and aid to the courts in mental disorder problems coming before them, and be it further

Resolved, That the legislative body of the civic government of St. Louis be asked to appropriate adequate funds for carrying on of the work that is being demanded of the Psychiatric Clinic and which it is at present unable to meet on account of its limited financial resources and personnel, further be it

Resolved, That the Secretary of the St. Louis Medical Society be directed to send a copy of these resolutions to (1) The Community Council, (2) the Honorable Mayor of the City of St. Louis, (3) Mr. Louis Nolte, Comptroller of the City of St. Louis, (4) Judge W. J. G. Neun, President of the Board of Aldermen; (5) Mr. A. H. Niederluecke, Chairman of the Committee of Public Welfare of the Board of Aldermen.

Dr. A. H. Hamel also presented the following resolution which on motion was adopted:

Whereas, The recent decision of the State Supreme Court (Missouri) has held invalid the local ordinance providing for the compulsory pasteurization of all milk other than certified, upon the ground that the sale of raw milk is legalized under the State Statutes, and therefore the ordinance requiring pasteurization is in conflict with this law, and

Whereas, The production of raw milk on a commercial basis under conditions that will guarantee its safety, for human consumption, is attendant with such heavy costs in its production as to be impractical, and

Whereas, Raw milk not produced under conditions required for certified milk is a constant source of danger in the spread of tuberculosis, typhoid-fever, diphtheria, scarlet-fever, septic sore throat and dysentery, and

Whereas, The application of the process of pasteurization (the heating of milk to a temperature of 140 degrees to 145 degrees Fahrenheit, and held 30 minutes) to all milk other than certified, eliminated diseases through the agency of milk. This has been determined by many years of practical application and scientific investigation of the process of pasteurization, and

Whereas, The process of pasteurization of milk does not destroy the lactic acid bacteria contained in milk, nor prevent the natural fermentative process of milk in any way—the vitamins naturally present in milk in sufficient quantity to be of significance are not destroyed nor modified, and

Whereas, Objections raised to this process on the grounds that it renders it less nutritious and wholesome as a food is unfounded as such process of pasteurization does not materially alter milk, either physically or chemically, as has been determined by exhaustive investigation in recent years, and

Whereas, Pasteurization is endorsed by the U. S. Public Health Service, the American Public Health Association, and other eminent authorities in the field of preventive medicine as the only practical and efficacious method of destroying the dangers that cannot be detected by the most scrupulous and conscientious inspection, therefore be it

Resolved, That the St. Louis Medical Society supports the Health Commissioner in his fight for a safe milk in the interest of health and infant welfare, and strongly advises all citizens to use only pasteurized or certified milk.

Meeting of April 20

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

The minutes of the previous meeting were read, corrected and approved.

The scientific program for the evening consisted of the following:

"Presentation of Dermatological Cases," with lantern slide demonstration by Dr. M. F. Engman.

Discussion by Drs. Wm. D. Davis, Wm. T. Coughlin, Louis Rassieur; Dr. Engman closing.

"The Occurrence of Yeast-Like Organism in Psoriasis," by Dr. M. S. Fleischer.

Discussion by Drs. G. V. Stryker, M. F. Engman; Dr. Fleischer closing.

"The Use of Autogenous Blood (Patient's Own Blood) in the Treatment of Localized Infections," by Dr. R. E. Wobus.

Discussion by Drs. Wm. T. Coughlin, Louis Ras-sieur, E. C. Funsch; Dr. Wobus closing.

E. C. FUNSCH, Secretary.

VERNON-CEDAR COUNTY MEDICAL SOCIETY

The Vernon-Cedar County Medical Society met Thursday, April 8, 1926, in joint session with 16th and 29th Councillor Districts.

At the noon hour the medical fraternity were guests of the Chamber of Commerce. The dining room of the Centenary Church was one flowing with good things to eat and a large number of people, more than 200 present. Doctor E. A. Dulin was toastmaster and in an eloquent manner introduced the speakers.

Dr. Emmett P. North, Dr. E. J. Goodwin, Mr. J. R. Davis, Hon. Lee B. Ewing and Judge O. H. Hoss were the speakers of the occasion.

Doctor North and Doctor Goodwin discussed some of the phases of needed legislation necessary to make Missouri a better and healthier state to live in. Mr. Davis' talk was a welcome address to the doctors. Mr. Ewing, eulogized the medical profession, paying special tribute to the snowy white heads of some of the men of many summers.

Judge Hoss, in his address, said that it was his belief that the high standing of the medical profession of Vernon County was unsurpassed by any county in any state. He also coincided with the ideas of Drs. North and Goodwin, and was quite sure that if a law was drafted that was broad enough to meet the needs of all the people that it would readily be passed at the next state legislature.

At 2 o'clock the scientific session was held in the circuit court room. Lectures were given by Doctors Ridge, McKenna, Cook and Schnoebelen. Anemia, goiter, focal infections and diseases of the heart were subjects under discussion. Also a very interesting X-Ray picture of a mummy, possibly 4000 years old, was shown. The picture revealed some bone disease that no doubt was bothersome to that particular Egyptian in his stay on earth.

More than 100 were present at this session, including physicians, the Ladies' Auxiliary and visitors. It was a "Red letter" day for the Vernon-Cedar County Medical Society and no doubt much good will come from this association and friendly exchange of ideas.

Those present were:

St. Louis: Drs. North, Goodwin and Schnoebelen.

Kansas City: Drs. Ridge, McKenna and Cook.

Sedalia: Dr. Titsworth.

Ft. Scott: Drs. Crume, Newman and Gooch.

Eldorado: Drs. Dawson and Dunnaway.

Lamar: Dr. Popplewell.

Sheldon: Dr. Althem.

Butler: Dr. Newlon.

Appleton City: Dr. Smith.

Harwood: Dr. Stokes.

Walker: Drs. Davis and Liston.

Milo: Dr. Keithley.

Rockville: Dr. Freeman.

Nevada: Drs. Amerman, Earl Amerman, W. S.

Love, Pottorf, Freiday, Todd, Brown, Willson, Combs, Dulin, Yater, Craig, Holmes, Smith, McLe-more and Hornback.

J. T. HORNBAC, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in the parlor of the Archer Hotel in Hartville, Thursday, May 6, at 1.45 p. m., with the president, Dr. E. C. Wittwer, in the chair and the following members present: Drs. E. C. Wittwer and A. C. Ames, of Mountain Grove; R. M. Rogers and J. A. Fuson, of Mansfield; R. M. Norman, of Ava, and B. E. Latimer, of Hartville. The minutes of the last meeting were read and approved.

Dr. Wittwer then called the vice president to the chair while he presented the subject of "Medical Economics," and more especially that part of the subject relating to periodical examinations of supposedly well people.

Other members present followed with a discussion of this and various economic phases of the practice of medicine, and thus the afternoon was devoted to what might be called largely the "bread-and-butter" side of our profession.

The meeting adjourned at 4:00 o'clock to meet at Ava August 5.

A. C. AMES, Secretary.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Twentieth Meeting, April 5, 1926

1. ON THE GASTRIC CONTENTS DURING PREGNANCY.—By DR. FRANZ ARZT.

The digestive disturbances during pregnancy as well as the changes in appetite and peculiar desires for certain foods, have all been well known and recorded very early in the history of medicine. Nausea and vomiting early in pregnancy, morning sickness so called, are classified in most textbooks under the heading of presumptive signs of pregnancy. However, in spite of these well known clinical facts, very little work has been done on the analysis of the gastric juice during pregnancy, even to the present time.

Kehrer in 1905, reports the examination of the stomach contents during pregnancy. His work precedes the introduction of the Rehfuess tube, but he suggests that there is a deficiency of hydrochloric acid, which he considers usual for pregnancy.

A recent article by Tetsutaro Nakai in the *Tokio Journal of Bio-Chemistry*, October, 1925, shows that during pregnancy the free acidity and total acidity of the gastric juice are lower than in non-pregnant cases, and that this deficiency is more marked during the first half. He reports the study of fourteen cases.

My work on the study of the stomach contents during pregnancy was started a year ago. It was suggested to me by Dr. Otto H. Schwarz, who had previously noted a decrease in the hydrochloric acid in three cases of early pregnancy in which the gastric contents had been examined. I have examined by the fractional method the gastric juice of

the pregnant woman in 25 cases, early in pregnancy at a time when the digestive symptoms are most marked, and again in late pregnancy after these symptoms have disappeared. The figures I have obtained show that in early pregnancy there is a marked hypoacidity, which, in the later months tends to decrease. In a majority of cases there is present an achlorhydria of the fasting contents, while the acid curve of the test meal, although decreased, is well defined.

Nausea and vomiting in early pregnancy, as the term "morning sickness" implies, occurs most commonly in the morning, usually just before the patient gets out of bed. It is a well known fact that if the patient before arising, eats a few crackers or a piece of toast and then does not get out of the bed until forty-five minutes or an hour later, the nausea and vomiting in a great many cases may be prevented. Now, if we consider that in both early and late pregnancy there is a marked deficiency of hydrochloric acid in the stomach, and that this hypochlorhydria is more pronounced the first three or four months, the time when nausea and vomiting are most commonly found, some relation between the vomiting and the acidity of the gastric contents would be suggested. Then too, the acidity of the gastric contents is greatest approximately one hour after eating, and it is at this time the patient is instructed to get out of bed and that the vomiting is prevented. For these reasons we attempted to determine the value of hydrochloric acid in nausea and vomiting of early pregnancy.

Using dilute hydrochloric acid, 5-15 drops in one-half glass of water before meals, we have treated twenty consecutive cases of "morning sickness" in our prenatal clinic. Nineteen of these, in which vomiting occurred one or more times a day, stopped vomiting entirely or else vomited only occasionally, while the nausea was greatly improved. In only one case no improvement was noted.

CONCLUSIONS

1. That the free hydrochloric acid and total acid of the stomach contents are lower in pregnancy than in non-pregnancy, and that this deficiency is more marked early, at the time that nausea and vomiting are most common.
2. That dilute hydrochloric acid by mouth is indicated in preventing early nausea and vomiting in certain cases.

DISCUSSION

DR. DUFF S. ALLEN: Our interest in these cases which Dr. Artz and Dr. Schwarz have reported has been in the causes for the lowered acidity which obtains here. Is it due to a lack of secretion of hydrochloric acid by the stomach, or is it due to neutralization of the hydrochloric acid after it has been formed? The fact that many of these cases with vomiting or pregnancy have associated with the vomiting other symptoms such as belching of gas, heartburn, etc., led us to believe that regurgitation of duodenal contents, rich in sodium carbonate, was responsible for the hypochlorhydria. This conclusion was the result of a series of animal experiments for the production of acute dilatation of the stomach, and a study of the origin and fate of gastro-intestinal gases.

If the hypochlorhydria in these cases of vomiting or pregnancy is due to a neutralization of the hydrochloric acid of the stomach by the sodium carbonate of the regurgitated duodenal contents, then, analysis of the stomach contents should show a nearly normal total chloride value. Accordingly, we determined the total chloride of the

stomach contents in eight of these cases with achlorhydria and hypochlorhydria. Free hydrochloric and total acid determinations were also made on the same samples of stomach contents. The amount of hydrochloric acid as determined by analysis gave no indication of the total chloride content. The total chloride values for the contents of these stomachs were within normal limits even if there were no free hydrochloric acid in the stomach. This seemed to indicate that the low acidity of the stomach contents, as determined by analysis of samples which had been withdrawn from the stomach, was the result of a neutralization of the acid contents of the stomach by the sodium carbonate of the regurgitated duodenal contents. The presence of bile in most of these samples of stomach contents was confirmatory evidence of duodenal regurgitation.

Furthermore, excessive belching may be due, at least in part, to duodenal regurgitation. Sodium carbonate of the duodenal contents, when mixed with the hydrochloric acid of the stomach contents, experimentally, liberates carbon dioxide gas. Reported analyses of gases which have been belched up are in fairly uniform agreement as to the percentage of carbon dioxide. At least they show a higher percentage of carbon dioxide than air, and, hence, it is probable that the eructated gas often is not air which has been swallowed but gas which has been formed in the stomach or duodenum. The high per cent of carbon dioxide of such gases is usually considered to be the result of fermentation. None of our 3 samples analyzed showed fermentation when incubated in a fermentation tube. Fermentation takes place too slowly to account for the rapid formation of carbon dioxide in any such cases. We believe that the carbon dioxide is the result of a chemical reaction between the carbonates of the duodenum and the acid of the stomach.

DR. J. W. LARIMORE: This excellent paper is of large interest and value to the obstetrician in giving better knowledge of the secretory activity of the stomach during the early period of pregnancy when nausea and vomiting in the early morning is such an annoying and treacherous symptom. It is gratifying that immediately this information was determined it could become the basis for helpful therapeutic measures in the administration of hydrochloric acid. While the author has formed no observations on control subjects the constancy of his findings are in themselves a proof of their significance. In the average run of patients with gastrointestinal complaints there occurs from ten to twelve per cent of achlorhydria. Hypochlorhydria gives an even larger percentage. However, in this series there is a constant finding of marked hypochlorhydria in all cases. Aside from the interest this work has from a viewpoint of obstetrics it has also a large value from the standpoint of gastric physiology for it demonstrated again a physiological influence upon gastric secretion, and still another physiological association. That the general body condition, both physiological and pathological, influences gastric secretion is well recognized. Depression of the gastric acidities has been shown in other endocrin states, in anemia, in fevers, in deficiency diseases and in metabolic diseases. In studying gastric secretion by the stomach tube we must remember that we are studying after all, a surface phenomenon and that we are not studying the chemical mechanism inside the secreting cells, nor the chemistry of the blood serum which has reciprocal relations to all local chemical processes. It has been shown that the carbonate of the blood serum and the carbon dioxide of the alveolar air increases proportional to the acid secretion during the digestive

cycle. This is a measure of the disposition of the base radical after the chlorin ion has been removed and secreted, but to be salvaged lower in the tract. The relationships of body chlorides to secretion and to gastric function is not well determined. Obstetricians have been for a long time practising administration of small amounts of carbohydrates in their efforts to control morning sickness and this given when the patient first awakens and before she arises. This could, of course, act in two ways, as tending to correct a blood acidosis, or by stimulating acid secretion into the stomach, it would have a corrective influence upon the peristaltic unrest. It is interesting in this connection that the ketosis of diabetes has associated a very low serum chlorid content. The administration of sodium chlorid in instances of post-operative vomiting has been shown by Lehman to have a corrective influence. Dr. Artz secures clinical improvement by the administration of dilute hydrochloric acid in the early vomiting of pregnancy. These observations are all somehow related to the chlorid content and secretion of the body, and point to a common factor which is yet to be worked out.

2. INTESTINAL ALLERGY.—Report of two cases with the results of Gastro-Intestinal X-ray Examination.—By DR. C. H. EVERMANN.

It is probable that gastro-intestinal symptoms can be produced as the result of allergic reaction. Longcope, Rackemann, Freemann, VanLeeuwen, Duke and others believe that allergic phenomena can produce such symptoms. Duke has observed a case classified as Henoch's purpura by roentgen ray examination of gastro-intestinal tract when the gastro-intestinal symptoms had been purposefully produced. He noted no marked difference in this examination when compared to the routine gastro-intestinal X-ray examination.

There are no symptoms characteristic of intestinal allergy as one finds in organic gastro-intestinal disease. Indigestion, nausea and vomiting and sometimes pain appear to occur most frequently.

First case studied was one of urticaria and right upper abdominal pain which seemed to point to right upper quadrant disease for which surgical relief was contemplated.

Gastro-intestinal studies including visualization of the gall bladder were negative. The pain of which the patient complained was invariably induced by the feeding of whole wheat.

The barium enema given during the period of pain showed the colon to be generally hypertonic with the haustra well separated, clear and distinct. The injection of 0.5 c.c. adrenalin chloride, 1-1000 solution produced subjective relief of the pain and the objective release of the colon spasticity, the picture stimulating the one taken during the routine gastro-intestinal examination, at which time there was no abdominal pain. This observation was controlled by giving a hypodermic of normal saline when the pain was present as the result of purposeful whole wheat feeding. There was no subjective relief of pain from this injection.

Second case is one of purpura, chronic nephritis and urticaria. This patient also had attacks of abdominal pain. We were invariably able to produce the patient's abdominal pain by purposeful feeding. This pain was always relieved by injections of adrenalin chloride, 1-1000 solution. The barium enema taken during the period of abdominal pain which had been produced by purposeful milk feeding, shows a generally hypertonic colon with clear, well

defined haustra extending into the sigmoid colon. This spasticity is in distinct contrast to the barium enema taken at the time when there was no abdominal pain.

3. THE MECHANISMS INVOLVED IN THE REMOVAL OF COLLOIDAL AND PARTICULATE CARBON FROM JOINT CAVITIES.—By DR. J. ALBERT KEY.

Colloidal carbon in the form of India ink was injected into the knee joints of a series of rabbits and the joints were studied at intervals of from 1 to 104 days. In the joint cavity much of the carbon formed aggregates and acted as particulate matter.

Most of the carbon was phagocytized by macrophages and leucocytes and by the tenth day after the injection it had been carried out of the joint by these cells. Small amounts of free carbon passed through the intact synovial surface, and the synovial lining cells took up some of the carbon in the form of small granules which tended to remain in these cells for an indefinite period. A variable amount of carbon was held in fibrin clots which became attached to the synovial surface and were invaded by cells which formed a free membrane on the surface of the clot, thus removing the carbon from the joint cavity.

An attempt was made to determine the fate of the carbon after it left the joint cavity. Small amounts were carried to the popliteal lymph node, and probably some of this reached the general circulation. Most of the carbon remained in the loose subsynovial tissues around the joint and much of this was repeatedly phagocytized and removed from place to place by succeeding generations of macrophages. The leucocytes were seen to expel ingested carbon, but the macrophages apparently retained the ingested material until the cell died. The various types of connective tissue and bone cells took up small amounts of carbon and tended to hold it indefinitely. Some of the carbon which had been injected into the joint was eventually transported into the femur, tibia, patella, and sesamoid bones.

OCCURRENCE OF THROAT INFECTIONS WITH STREPTOCOCCUS SCARLATINAE WITHOUT RASH

An investigation was made by Franklin A. Stevens and A. R. Dochez, New York (*Journal A. M. A.*, April 10, 1926), of an epidemic of hemolytic streptococcus infection as to whether an anginal infection with *Streptococcus scarlatinae* can occur without a rash. If such infection does occur, does it occur in susceptible persons, as indicated by the intracutaneous toxin test for immunity? Do agglutination and toxin production correspond as a test of specificity for the identification of strains of hemolytic streptococcus during an epidemic of scarlet fever? Are strains of hemolytic streptococci from cases of acute pharyngitis as closely related as the groups from scarlet fever and erysipelas? These questions are answered as follows: Scarlatinal infection of the throat may occur without a rash. This type of infection may occur in individuals showing negative skin reactions to scarlatinal toxin. The Dick test is not a reliable index of immunity to such throat infections with *Streptococcus scarlatinae*. Agglutination reactions with scarlatinal serum and toxin production are closely parallel. There is no antigenic relationship between strains of hemolytic streptococci from acute streptococcus pharyngitis.

BOOK REVIEWS

FACTS ON THE HEART. By Richard C. Cabot, M.D., Professor of Medicine and of Social Ethics at Harvard University. Illustrated. Philadelphia and London. W. B. Saunders Company. 1926. Price \$7.50.

Cabot's new book is planned along the same lines as his previous volumes on Clinical Diagnosis. He takes 1906 cases of heart disease that came to necropsy at the Massachusetts General Hospital between 1896 and 1919 and recounts each in detail, first the anamnesis, then the physical and laboratory findings and finally the necropsy. Many of the cases are followed by an interesting discussion between clinicians and pathologist and each chapter opens with a brief statistical analysis of the material, the first chapter of the volume being an extensive statistical analysis of all the cases.

The book is distinctly hard reading and few will have the endurance to go straight through it. As a mine of clinical and pathologic information, however, its value is great; its treasures are rendered readily accessible by a detailed table of contents and index. Some of the statistical conclusions are startling indeed. Thus we read:

(a) That 77 per cent. of all heart disease is due to simple hypertrophy and dilatation of the heart, without valve lesion.

(b) That rheumatic valvular disease is approximately twice as common as all the varieties of syphilitic aortitis combined, or

(c) Five times as common as syphilitic valvular disease.

(d) That mitral stenosis, existing alone or combined with other valve lesions, is about three times as common as all other rheumatic valve lesions combined.

(e) That mitral stenosis uncomplicated is about twice as common as any other single valve lesion.

The book is marred by an undue number of typographical errors evidently due to careless or inexperienced proof reading.

A. E. T.

THE TREATMENT OF FRACTURES IN GENERAL PRACTICE. By C. Max Page, D.S.O., M.S., F.R.C.S., Senior Surgeon to Out-Patients, St. Thomas's Hospital, and W. Rowley Bristow, M.B., B.S., F.R.C.S., Surgeon to the Orthopedic Department, St. Thomas's Hospital. Oxford University Press, 35 W. 32d St., New York City. 1925. Price \$4.00.

The aim of this short book on fractures is to "provide a ready work of reference for the general practitioner, the house surgeon or the medical student."

The authors have succeeded admirably in their intention. The book is concise, easily read, and contains many useful hints. The first part is devoted to the general discussion of fractures. The diagnosis, repair, complications, the various general methods and principles of splinting, are treated briefly but thoroughly. The advantages and disadvantages of operative treatment are presented. Operative technique is not included, as the authors consider this without the scope of the book.

Chapters VIII to XIV deal specifically with the different types of fractures. These include fractures of the upper extremity, lower extremity, pelvis, spine, ribs and sternum, skull, and fractures of the bones of the face and jaw. The different types of fractures seen in these localities are described and

illustrated by X-Ray pictures, and the treatment of each is given.

This is an excellent book. It is well illustrated and contains many useful suggestions and at the same time it is condensed so that they can be readily found without having to plow through an excessive amount of redundant text. It will make a welcome addition to any medical library.

A. O. R.

A TEXTBOOK OF MEDICAL DIAGNOSIS. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine at the Medico-Chirurgical College Graduate School, University of Pennsylvania; and L. Napoleon Boston, A.M., M.D., Associate in Medicine, Graduate School of Medicine, University of Pennsylvania. Third edition. Cloth. 1422 pp. with 555 illustrations, 21 in colors. Price \$12.00 net. W. B. Saunders Company, Philadelphia, 1925.

The first edition was copyrighted in 1911; reprinted in 1912. The second edition appeared in 1914. The third edition November, 1925.

The subject matter of the book is so complete that it might be looked upon as a practice of medicine rather than a manual of diagnosis. Thus in the section on diseases of the liver one finds the discussion of the diseases almost as complete as one would find in Osler, but of course without the treatment; and only relatively small space given to the description of the technique of the various methods of diagnosis. Thus the tetrachlor liver function test is the only one mentioned and that entirely by the technique of Piersol and Bockus; the technique of the visualization of the gallbladder as worked up by Graham is not there; neither is Rosenthal's method of using tetrabrom intravenously.

Similarly in the article on blood chemistry by A. J. Rubenstone (pages 371 and following) we find an essay on the subject of blood chemistry rather than a detailed discussion of the technique to be followed in working up blood chemistry.

Therefore the book will be of use to the general practitioner who wants something that can be used as a work for general reference on these points of diagnosis rather than the man who is interested in details of technique. Of course the book is subject to the handicap that all such books have of being one or two years behind the current literature on the subject.

G. H. H.

A HANDBOOK FOR SENIOR NURSES AND MIDWIVES. By J. K. Watson, M.D. (Edin.), Late House-Surgeon, Essex and Colchester Hospital. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$4.00.

This book is a condensed review of the medical literature of today, covering in a very interesting manner our entire field of knowledge of medicine, surgery, obstetrics and bacteriology. It is inconceivable that Great Britain should have a number of nurses and midwives to whom this book would be intelligible. In America this book could be read with great profit by the average general practitioner in medicine who has not served an internship. The day may come when nurses and midwives will take a Bachelor of Arts degree before they study their specialty. Today, however, we have few nurses in America, and certainly no midwives, who could appreciate this book.

The chapters on surgical technique, orthopedics and obstetrics are particularly well written.

W. C. G.

GYNECOLOGY FOR NURSES. By M. J. Seifert, A.B., M.D., F.A.C.S., Attending Surgeon and Gynecologist, Columbus Hospital, Chicago. D. Appleton and Company. New York and London. 1925.

In this volume of a little over three hundred pages, Seifert has given a very complete outline of the more common diseases of women, including those of the mammary gland. The opening chapter deals with the philosophy of disease processes. In the remainder of the book he takes up first of all, the physiological processes, then pathological gynecology, a short chapter on therapeutic gynecology, and finally a consideration of operative measures, radiotherapy and endocrinology.

From experience in teaching of nurses, I believe this volume can hardly be recommended except as a reference book. It would be more suitable as a brief outline for medical students. The complex terminology and the lengthy descriptions of relatively rare conditions make it particularly unsuitable for use in nurses training schools. There are relatively few textbooks written by physicians for the instruction of nurses that bear in mind this difference in preliminary training and purpose. Such important matters as the early recognition of cancer of the breast and of the uterus are hurried over in a few words, nor do we find any special consideration of the relationship of the nurse to the recognition and care of venereal diseases in women. The chapter on Diet in Gynecology seems unnecessary, since we can hardly say that any special diet is suitable for this group of diseases. The concluding chapter on Medical Terminology is of considerable value.

F. J. T.

NEPHRITIS. By Herman Elwyn M.D., Assistant Visiting Physician, Gouverneur Hospital, New York, N. Y. New York. The Macmillan Company. 1926. Price \$5.00.

In this volume Elwyn gives us in a concise and systematic manner the modern conception of nephritis. The book is concerned only with medical nephritis, but this is very thoroughly reviewed. The anatomy and physiology of the kidney are shown in their relation to pathological processes, and a clear picture is presented in explanation of the various symptoms. The book is to be commended for its clear and logical structure, for its classification of kidney diseases, and for its extensive references to the most recent literature of the subject.

Anyone wishing a complete and up-to-date resumé of the various nephritides and nephroses, will find this a useful addition to his library.

H. M. Y.

MEDICAL DIAGNOSIS. For the Student and Practitioner. By Charles Lyman Greene, M.D., St. Paul, formerly Professor of Medicine and Chief of Medical Clinic in the University of Minnesota. 6th Edition. 1468 pp. 709 illus. with 14 colored plates. Bound in handsome buckram. Price \$12.00. Philadelphia, P. Blakiston's Son & Co. 1926.

This revised book of Medical Diagnosis is everything that the author claims for it. It is an indispensable book for the practitioner as well as student.

The mere revision of the book since its fifth edition four years ago is ample proof that much obsolete material has been eliminated and newer methods and procedures of merit introduced.

The section on the clinical importance of basal metabolism and the diagnosis of cardiovascular diseases alone make the book indispensable. The reviewer endorses this edition very highly. A. C. C.

MODERN MEDICINE. Its Theory and Practice in Original Contributions by American and Foreign Authors. Edited by Sir William Osler, M.D., F.F.S. Late Regius Professor of Medicine in Oxford University, England. Third edition, thoroughly revised. Re-edited by Thomas McCrae, M.D., assisted by Elmer H. Funk, M.D. Volumes 1, 2, 3. Lea & Febiger. Philadelphia and New York. 1925. Price \$9.00 per volume.

The principal contribution in this volume is that on tuberculosis, and the chief writer is Allen K. Krause while Lawrason Brown contributes to the clinical side of the subject. The aspect or view of tuberculosis as presented in the edition differs markedly from that in the first edition seventeen years ago. For example, Krause says (page 319): "First may be mentioned that when tuberculosis makes its initial appearance its pathological background is practically always an old process or the result of one. This is true except in the youngest infants. Even in infants a year or two old, anatomical changes are as likely as not to have existed for some months before the tuberculosis comes to our attention. In older children the pre-clinical period of concealed pathological development will frequently have been years; in adults, decennia. It is obvious, therefore, that in the human being it is rarely permitted us to observe the unfolding of tubercle in really virgin soil. We may see this and follow it only after it has struck root and come to relatively mature growth, and in the process perhaps profoundly altered its place of residence and endowed the latter with new capacities of response to its activities."

Krause shows also that the development of pathogenesis of tuberculosis is a question of the balance existing between fibrosis and necrosis of the focus.

Professor Ravenel, of Columbia, writes on anthrax and glanders.

The work on diphtheria, written by John H. McCollom and Place, is revised by Thomas McCrae.

The article on scarlet fever, written by John McCollom, is revised by Elmer H. Funk.

The article on undulant fever, written by Sir David Bruce, has been revised by George C. Low.

The attempt to bring out a new edition after twelve years is one requiring considerable courage, but the publishers evidently believed that there is a demand for it, if for no other reason than that it is a record of the type of work that Osler did in medicine. Probably the work will secure much more widespread use because it bears Osler's name than because of its intrinsic value.

Volume II. In this volume Ravenel, of the University of Missouri, writes an interesting article on Rabies. Other outstanding articles are Strong's on Amebiasis (Amebic Dysentery); Poynton's article on Rheumatic Fever in which, of course, he advocates the infection theory; and Low's revision of Bruce's article in Trypanosomiasis.

This volume appeals to us distinctly more than the preceding volume and does much to convince us that it is not necessary for us to use a loose-leaf system in order to keep our system for medicine up to date.

Volume III. Your reviewer was interested in finding out the food constituents of grape fruit. Therefore, he looked at the table given in DuBois' article and he found that grape fruit was not mentioned, and he found that the table has been simply an old one taken from Atwater and Brandt published in 1923. But he had better luck when he read Edward Jenner Wood's article on Sprue in Chapter

11 which gave reports that were up to 1924 and 1925 and in that way quite satisfactory.

Thomas B. Futcher's article on Diabetes Mellitus and Insipidus, also impressed your reviewer as being an excellent summary of the subject. The only question was whether its being such a brief summary did not make it rather difficult of understanding for one who had no knowledge of diabetes to begin with.

The illustrations of the tongue, given in Mohler's revision of Riesman's article on Diseases of the Mouth and Salivary Glands, are somewhat too diagrammatic to be impressive. Yet, that subject is one that could be written on with profit more than it is and your reviewer is sorry that greater space was not given to it.

The other writers are: James Anders, Thomas R. Brown, Louis H. Clerf, Julius Friedenwald, Chevalier Jackson, B. B. Lyons, Charles F. Martin, Eugene L. Opie, Sir Humphry Davy Rolleston, Alfred Stengel, Charles G. Stockton, Colin G. Sutherland. Such a distinguished array of authors would alone make this a desirable volume to have for reference.
G. H. H.

HISTORY OF MEDICINE. By Dr. Max Neuburger, Professor of Medical History in the University of Vienna. Translated by Ernest Playfair, M.B., M.R.C.P. In two volumes. Vol. 11, part 1. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$2.25.

Dr. Max Neuburger, who holds the chair of Medical History in the University of Vienna is one of the world's leading scholars in his specialty. His History of Medicine now being published in German, is being translated into English and published by the Oxford University Press.

This instalment, Part 1, Volume 2, is the first section to be printed in English and is completely detached from what is to precede and to follow it. The publishers have followed this rather unusual course owing to the pressure of English readers, who seem to be unaware of the fact that the original German work is not yet published.

A perusal of this segment of the treatise mirrors very clearly the master grasp of the subject that is Neuburger's. The Middle Ages are not easy to write about. But Neuburger with bold dashes of a broad brush has mapped out these times in a fashion that not only tokens a thorough knowledge of all that has already been written, but also a familiarity with important old manuscripts of medieval times. One will look in vain for details or a chronological setting down of sequences, but one will find a sound critique of middle age doctrines, schools and men; a critique that is made particularly lively through the expression (in small type) of highly condensed commentaries.

The book clearly will not serve as a guide to beginners in medical history, but it will be none the less invaluable to those who, partially familiar with the subject, desire to broaden their knowledge.

M. G. S.

ASTHMA AND ITS RADICAL TREATMENT. By James Adam, M.A., M.D., C.M., F.R.C.P. & S. (Glas.) Hon. Surgeon, Diseases of the Ear, Nose and Throat, Glasgow Royal Infirmary. Second Edition, revised and enlarged. St. Louis, C. V. Mosby Company. 1926. Price \$3.50.

The author attacks the problems of bronchial asthma from the standpoint different from the present conception that it is an allergic manifestation.

He believes: (1) That asthma is a toxemia, accompanied by acidosis. (2) That asthma is not primarily anaphylactic, though the toxemia may render a patient more prone to it. (3) That the nose will suffer, like other parts of the respiratory tract, and like the skin. (4) That means directed against the toxemia are essential, nasal treatment being in many cases a necessary adjunct.

The aim of treatment, therefore, is to detoxicate the patient, and then to prevent toxemia by insisting on a healthy mode of life. Detoxication is obtained by the surgical care of identifiable foci, usually in the nose and the elimination of certain foods from the diet. By this means the author claims 65 per cent. of cures and 20 per cent. more much improved.

Any therapeutics which can obtain these results in bronchial asthma is highly desirable but requires exacting scrutiny before it can be universally accepted.

He states, referring to the first edition, "Some of my friends, who agreed as to the success of my treatment, have said that the secret of it was not revealed in my book." The same statement holds true for this edition.
C. E. H.

THE THERAPY OF PUERPERAL FEVER. By Privatdozent Dr. Robert Koehler, Formerly Assistant of the Gynecological Department of the Frankenhäuser Wieden (Director: Hofrat Professor Dr. Josef Halban) in Vienna, Austria. American Edition prepared by Hugo Ehrenfest, M.D., F. A. C. S., Associate in Obstetrics, Washington University School of Medicine, St. Louis. Twenty-seven illustrations. The C. V. Mosby Company, St. Louis. 1925. Price \$4.00.

It is seldom that one can say of a new book that it fills a long felt want. This work of Koehler, however, is certainly a valuable addition to our literature. The Americanization of the volume by Ehrenfest makes it quite readable; in fact, the reviewer has never seen a German work so concise and to the point. It is further noteworthy to find a real index which makes reference easy, as well as to find a German author who gives full credit to American workers.

In the small space of this volume it is remarkable to find practically every phase of the subject covered, even to the latest work on the injection of dyes to combat septicemia. The book is of distinct value to the general practitioner who sees most of these cases, for it tells him in a few words just what to do to prevent puerperal fever, as well as how to treat it when it has developed. To the obstetrician it furnishes a handy résumé of the subject to date, as well as a remarkably extensive bibliography for further reference. Furthermore, every surgeon should have this volume in his library, for it discusses with sufficient thoroughness the operative measures which are at times useful, as well as giving the indications therefore and a concise statement by a recognized authority on what may be expected from such surgical intervention in properly selected cases.

R. E. W.

LECTURES ON NUTRITION. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa, and Washington (St. Louis). 1924-25. Illustrated. Philadelphia and London. W. B. Saunders Company. 1925. Price \$2.50.

There is a wealth of information contained in this book of lectures so clearly and ably given by the

leaders in nutritional studies and achievements. The problems of metabolism have been much clarified by the work of Benedict, Lusk, DuBois and Hill. The lecture on "Our Present Knowledge of the Vitamins," by Elmer Vernon McCollum, contains much that is new and worth while. Herbert McLean Evans' lecture on the "Relations Between Fertility and Nutrition" is a revelation to students of nutrition.

E. P. B.

INTESTINAL TUBERCULOSIS. Its Importance, Diagnosis and Treatment. A study of the secondary ulcerative type. By Lawrason Brown, M.D., Chairman of the Medical Board of the Trudeau Sanatorium, Saranac Lake, New York; and Homer L. Sampson, Roentgenographer, of the Trudeau Sanatorium, Saranac Lake, New York. Lea & Febiger. Philadelphia and New York. 1926. Price \$4.00.

Brown and Sampson brought out a valuable contribution to the whole tuberculosis problem in their new book. The style, the illustrations and the presentation of the subject is what one would expect from such careful workers. Nobody interested in tuberculosis, either from the medical or surgical standpoint should fail to study this work. Their conclusions after a survey of their own work and that of the world at large are, first, that intestinal tuberculosis is comparable to that of pulmonary tuberculosis twenty-five years ago. That the careful studying of the case from the standpoint of X-ray findings, shows conclusively that about fifty per cent. of cases having pulmonary tuberculosis, show signs of involvement in the intestine. That the finding of tubercle bacilli in the stool is not evidence of tuberculosis of the bowel, as they have found bacilli in eighty-five per cent. of all patients with tubercle bacilli in the sputum.

The treatments recommended are mostly medical, including the use of ultra-violet rays and sunlight. In regard to surgical interference they recommended excision when only the earliest lesions can be detected. They do not recommend operation in the advanced cases of pulmonary involvement, except for the relief of symptoms. Calcium chloride intravenously is recommended by the authors, in the diarrhea following tuberculosis involvement of the colon. A short chapter on the value of the intraperitoneal injection of oxygen is given.

This book represents the first one issued by the staff of the Trudeau Sanatorium, Saranac Lake, New York. The reviewer recommends this book to surgeons and medical men.

J. J. S.

INTRAVENOUS THERAPY. Its Application in the Modern Practice of Medicine. By Walton Forest Dutton, M.D. Formerly Medical Director, Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania; 2d edition. Cloth, 594 pp., illus. Philadelphia, F. A. Davis Company. 1925.

This is a good example of spreading out for publication's sake of matter which would make a good manual into a large volume. There is a general interest in intravenous therapy, and there is not much doubt that it has a distinct place in medicine, but Dr. Dutton's book is manifestly padded by the addition of much material from the literature which apparently he has not tried out personally.

The first part of the book consists of the general technique of intravenous therapy and in which he includes a study of arsphenamin and allied arseni-

cals. This is an interesting discussion and is of itself sufficient to justify the publication of a manual on intravenous therapy.

The second part consists of a detailed alphabetical arrangement of the various diseases and syndromes, along with the literature for treating them.

G. H. H.

EYE, EAR, NOSE AND THROAT MANUAL FOR NURSES.

By Roy H. Parkinson, M.D., Visiting Oculist and Aurist to St. Joseph's Hospital, San Francisco, California. Illustrated. St. Louis. C. V. Mosby Company. 1925. Price \$2.25.

The book is intended to be a classroom manual for nurses' training schools. The first three chapters, on the throat, nose, and ear give brief descriptions of the anatomy and physiology of the region, followed by brief descriptions of the diseases, their symptoms and treatment. Four chapters give the anatomy and physiology of the eye, including refraction, and all of the external and internal ocular diseases, their symptoms, diagnosis and treatment.

Four chapters follow on the care and treatment of cases, and on operating room technic. The nurse's duties in preparing patients for examination, treatment and operation, and the preparation of dressings and instruments are here given, and then a list of operations with the instruments required for each, all copiously illustrated.

The final chapter is on the work of the public health nurse, giving methods of detecting defects of vision and hearing, and nose and throat conditions requiring treatment.

To the reviewer the book seems to contain more of explanation of the specialist's work and problems than of instruction in the nurse's part in the care of the specialist's cases. Especially noticeable is the absence of instruction on first aid in injuries and burns.

There is a need of such a book as this, and it will be a real help to those concerned with the teaching of nurses in these branches.

R. J. C.

SCOLIOSIS. Rotary Lateral Curvature of the Spine.

By Samuel Kleinberg, M.D., F.A.C.S. Assistant Surgeon, New York Hospital for Ruptured and Crippled; Attending Orthopedic Surgeon, Israel Orphan Asylum; Associate Surgeon, Lebanon Hospital, New York. New York. Paul B. Hoeber, Inc. 1926. Price \$6.00.

Book is very well gotten up, print is clear, paper is good. It is carefully written and for the most part could be read pleasantly and to advantage by the average educated instructor in calisthenics. Book brings in most of information concerning scoliosis up to date. Very little new for the Orthopedist.

M. L. K.

NEWER METHODS OF OPHTHALMIC PLASTIC SURGERY.

By Edmund B. Spaeth, M.D., F.A.C.S., Chief, Eye Clinic, Walter Reed, U. S. Army General Hospital, Washington, D. C. With 168 illustrations. Philadelphia. P. Blakiston's Son & Co., 1012.

Spaeth has compiled, illustrated and elucidated well established principles of plastic surgery of the eyes and face. The paragraph devoted to Ollier-Thiersch will interest any surgeon.

The last chapter is devoted to physiotherapy and medication in its application to plastic surgery, and eight pages in the appendix gives a classified bibliography.

A. W. M.

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ORIGINAL ARTICLES

INFANTILE PARALYSIS

REPORT OF EPIDEMIC IN KANSAS CITY IN 1925.
WITH SPECIAL REFERENCE TO TREATMENT
WITH ROSENOW SERUM.

REX L. DIVELEY, M.D.
KANSAS CITY, MO.

In the early part of July, 1925, there appeared in Kansas City several cases of anterior poliomyelitis, and after a lapse of four months, 51 cases had been reported to our local board of health. A brief summary of these cases as reported may be of interest: 17, or 33 per cent. of these cases died; 2, or 4 per cent., recovered without residue paralysis; 19, or 37 per cent., showed paralysis of varying degrees, and all have a residue paralysis at this time, about 50 per cent. reporting improvement; 13, or 26 per cent., could not be found by the visiting nurse for treatment or observation, and hence their present condition is unknown.

I shall leave these statistics without comment other than to draw your attention to the high death rate and the gradual increase in number of reported cases, as compared with former years.

It was my good fortune to follow personally a series of these cases with the addition of a few patients from the outlying districts.

As the etiology, pathology, symptomatology and epidemiology of infantile paralysis have been so thoroughly studied and reported, we felt our best efforts should be centered on the treatment of this infection during its acute stage. Many forms of treatment have been offered to the profession, and parts of all contain merit, but there is no clear cut standard of treatment for this malady during the acute or early stage.

During the past year, several reports have been given on the treatment and control of acute poliomyelitis. Show, Thelander and Fleischner advise the use of convalescent serum, swinging back to the teaching of Levaditi, Flexner and Lewis, but differing in the technic as the serum is given intravenously

and intramuscularly, while by these early teachers it was given intraspinally. It was no doubt this intraspinal technic which accounted for the poor results which these early workers obtained. Rosenow, Slugg, Clarke and Dowe report brilliant results by the use of the antipoliomyelitic horse serum. Yet none of these reports seem definite enough to give us the complete outline of treatment and achieve the results which we would like.

Our principal aim in the study of this small series of cases was to try and formulate the best method of treatment for this malady during its acute stage. Dr. Rosenow has been very kind in his cooperation with us in our study, and it was with his antipoliomyelitic horse serum that we worked.

The following outline of treatment was given this series of cases:

Strict isolation, early and repeated spinal drainage to keep the pressure down, followed by antipoliomyelitic serum given directly after the spinal drainage, and general hygienic treatment.

Fourteen cases were personally followed, 10 of which received treatment according to the above outline; 4 received only the medical treatment with no aim at specific therapy. Of the 10 treated with serum and spinal drainage, the results were as follows:

Two cases showed no paralysis, although the symptoms and spinal fluid findings gave a typical picture of poliomyelitis.

Three, or 30 per cent., showed recovery to almost normal.

One showed good recovery and 2 showed only fair recovery.

Two patients, or 20 per cent., died; one we believe died of secondary meningitis, the second of pneumonia.

In all cases except two the serum was given after the paralysis was noted, so our results must be gauged accordingly. The acute symptoms in every case abated almost immediately after the spinal drainage and administration of the serum.

Four cases did not receive serum or spinal drainage. Of these, 2 or 50 per cent. died; one after 36 hours of illness and the other ten days

after the first symptoms were noted; both died of respiratory failure, the infection probably attacking the centers of respiration. The other two had extensive limb paralysis which showed no improvement over a period of observation lasting 4 weeks.

We did not study these cases with the idea of lauding the value of Rosenow serum or spinal drainage, but rather approached our treatment and results obtained therefrom with an open mind, hoping that the conclusions would speak for themselves.

We feel that from the study of this brief series of cases, the following conclusions seem justifiable:

First, that the cases treated with Rosenow serum showed a more rapid recovery and the paralysis was not so profound and extensive as the untreated cases.

Second, the effect of spinal drainage on the acute symptoms was almost phenomenal, the symptoms disappearing for the most part a very short time after the drainage and only appearing when the spinal pressure again raised above normal.

Third, the death rate of the treated series was much smaller than of the untreated cases.

Fourth, there was a glycosuria and hyperglycemia in a large percentage of the reported cases, thus substantiating the point that several men have made, that this infection has some effect on the carbohydrate metabolism, which is probably an inflammation of the pituitary bodies.

Fifth, we still believe and advise the ideal treatment for acute anterior poliomyelitis to be: (1) strict isolation; (2) early and repeated spinal drainage to keep the abnormal pressure down; (3) serum, either human serum or immunized horse serum of Rosenow, should be given directly after the spinal drainage, either intramuscularly or intravenously depending upon the symptoms of the patient; (4) general hygienic medical treatment.

We hope to continue our experimental work with the use of the serum treatment during the coming poliomyelitic season, and there will be available for the use of the profession, not only the immunized horse serum of Rosenow (through the courtesy of the Mayo Foundation and Dr. Rosenow) but also human convalescent serum. These serums can be obtained by writing, telephoning or telegraphing to Dr. Rex L. Diveley, 1807 Federal Reserve Bank Building, or the Duncan Laboratories, Argyle Building, Kansas City, Mo. No charge is made for these serums as they are being distributed for experimental purposes.

1807 Federal Bank Building.

ACCIDENTAL HEMORRHAGE IN PREGNANCY*

F. P. MCNALLEY, M.D.

ST. LOUIS

We have used the title "Accidental Hemorrhage," because it is the only one which would cover all of the three cases which are here reported. There are three terms commonly used to describe the clinical picture seen in these cases; namely, premature detachment of a normally implanted placenta, ablatio placenta, and uteroplacental apoplexy. If the separation of the placenta is the only lesion, as in traumatic cases, then the first term is descriptive; but if there is infiltration of the uterine wall, with blood, then the placental separation is only a symptom and the term is not descriptive of the condition. The same objection is true of ablatio placenta. Uteroplacental apoplexy is certainly descriptive of the lesion to which it is applied, but as yet it is not generally admitted to be always present in cases which show signs of placental separation.

While we can add nothing new to the scant knowledge already at hand so far as this condition is concerned, it was thought worth while to report three cases of probably different etiology.

REPORT OF CASES

The first is a case of premature separation of the placenta as the result of trauma. This was a white woman, age 34 years, in her second pregnancy, the first terminated at full term one and one-half years ago, without complication. Her last period was March 10, 1922, and she entered the hospital September 30, 1922, in the twenty ninth week of her pregnancy. Shortly before admission she had been struck by an automobile and had very profuse hemorrhage. When seen one hour after the accident there was no bleeding but the vagina was filled with clots. The uterus was three finger breadths above the umbilicus, of normal consistency, and contracting at 2 to 3 minute intervals. No free fluid in abdomen. No fetal heart heard; no fetal movements felt. Patient in shock. Systolic pressure ranged from 45 to 60. In addition, there were numerous abrasions and contusions and a fracture of the clavicle and ankle. She was given 490 cc. of blood by the syringe canula method and reacted well. The contractions became fewer but continued intermittently until eight days later when, after a labor of three hours, she delivered a macerated fetus. In the interval there had been no bleeding. The placenta showed old blood clot over about one half of the maternal surface, indicating that this was the extent of the separation.

The second case was associated with a hemorrhagic diathesis. She was colored, age 30 years, had three previous pregnancies, the first thirteen years ago, the last two and one half years ago. All apparently normal. No history of tendency to bleed previously. Last period some time in October, 1924. Entered hospital May 6, 1925, about twenty eight weeks pregnant. Pregnancy uneventful until sud-

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den onset at 7 p. m. night before admission with severe abdominal pain, which continued. Twelve hours later began to bleed from gums and vagina; also vomited dark blood. Patient acutely ill. Uterus very hard. Bleeding from gums and vagina. B. P. 115/80. Rbc. 2,400,000. Wbc. 23,600. Hb. 37 per cent. (Palmer). Cell volume 19 per cent. N. P. N. 37.5. Urea nitrogen 8. Bleeding time $4\frac{1}{2}$ minutes. Blood drawn in test tube never clotted. Patient given 30 cc. of 30 per cent sodium citrate and five hours later clotting time was $3\frac{1}{2}$ minutes. Given transfusion of 600 cc. citrated blood. Three hours after admission delivered spontaneously a stillborn fetus weighing 2050 gms. Placenta followed immediately. Free bleeding. Uterus tightly packed but slight bleeding continued. Pack removed after twenty four hours. No further bleeding. Given 600 cc. citrated blood again. Six days later Hb. 27 per cent (Palmer). Given 650 cc. citrated blood. Three days later Hb. 40 per cent. Recovery uneventful. Discharged two weeks post partum. Placenta showed that a considerable portion had been detached.

While the uterus was not seen, this case of premature separation with interval bleeding, in all probability had the lesion of utero-placental apoplexy, judging from the consistency of the uterus and the continued bleeding in spite of the pack. Besides the apparent hemorrhagic diathesis there was a high N. P. N. and urea N., which might be taken as evidence of toxemia.

The third case was one of the rare types of concealed hemorrhage. The patient was white, age 22 years, in her second pregnancy. The first was complicated by albumin and marked edema from the sixth month to $7\frac{1}{2}$ months, at which time it terminated spontaneously following a fall. Baby lived one hour. As near as can be determined, there was no complication like the present. Last menses December 24, 1924. First seen April 6, 1925, and under constant observation thereafter. Blood pressure ranged from 108 to 118. Urine always negative. Pregnancy uncomplicated except for edema of ankles extending halfway to the knees for eight days previous to onset of present attack. At one a. m. August 18, 1925, when in 33rd week of pregnancy, began to have severe, constant abdominal pain. Seen at 5 a. m. Patient pale, apparently suffering acutely with constant abdominal pain, with exacerbations occurring at 3 to 5 minute intervals. No vaginal bleeding. McDonald 34 cm. Uterus hard, ligneous, becoming harder at intervals. No free fluid in abdomen. No fetal heart, no fetal movements. Pulse 80. Sent to hospital. Rbc. 3,104,000. Hb. 70 to 80 per cent. (Tallquist). B. P. 110/75. Pulse 80. Patient's condition of shock out of all proportion to these findings. Diagnosis: Uteroplacental apoplexy. Since patient was having uterine contractions and cervix admitted two fingers, it was hoped that dilatation would progress so delivery could be accomplished from below. At 10 a. m. four hours after admission, condition the same. Cell volume 29.5 per cent. Hb. 57 per cent (Palmer). N. P. N. 25. Uric acid 3.9. Urine showed faint trace of albumin, occasional granular cast. 12:30 p. m. uterus increasing in size. McDonald now 36 cm. No vaginal bleeding. Cervix the same. Contractions continue. At 5 p. m., Dr. O. H. Schwartz called in consultation. Condition slightly worse than this morning. Cervix remains the same. Safe vaginal delivery seemed improbable. Thought best to do a Cesarean section.

At operation a small amount of yellow free fluid in abdomen. Both lateral borders of uterus extending anteriorly and posteriorly almost to midline, both broad ligaments to pelvic wall, the bladder

peritoneum and peritoneum over lower segment posteriorly densely infiltrated with blood. No fissures in peritoneum. Uterus in midline anteriorly and posteriorly seems normal. On opening the uterus the placenta was found anteriorly and half detached, with two large blood clots and small amount of fresh blood behind the placenta and membranes, estimated in all to be about one liter. Amniotic fluid clear. A fetus showing beginning maceration extracted and placenta removed. Uterus contracted well with no more than ordinary bleeding. Usual closure of uterine wall and abdomen. Patient stood operation well. Post-operative course complicated by ileus and acute dilation of stomach coming on thirty six hours later and lasting four days. Complete recovery. There was no evidence of a toxemia in this case except the one specimen showing a trace of albumin and occasional cast. No hemorrhagic tendency.

Frequency. Premature separation of the placenta, if all the cases with slight bleeding during labor and those where small retro-placental hematomata can be demonstrated, is a frequent occurrence. It is questionable, however, if these have the same etiology as the cases of uteroplacental apoplexy, which are relatively infrequent. In 1915 Williams stated that in 3000 deliveries premature separation was noted seventeen times, but on only eight cases was it so severe as to afford a direct indication for terminating the pregnancy. The concealed type is rare, none occurring in his series.

Diagnosis. The diagnosis of the severe case should be relatively easy. The one case personally observed showed the same symptoms as those described in the literature, i. e., sudden onset of constant abdominal pain, with the characteristic ligneous consistency of the uterus which gradually becomes larger. Pallor and weakness as in shock, but in our own case and many reported, the slow pulse was very striking and out of all proportion to the degree of shock apparently present. According to Holmes, the ligneous consistency is characteristic when present, but may be absent or the uterus may even be flaccid.

Etiology. So far as the etiology is concerned, only one point seems clear and that is that trauma does not play a part in the condition that is usually meant when uteroplacental apoplexy or premature separation of the placenta is spoken of. Trauma can separate the placenta, as in our first case, but this is the only lesion and the difficulties encountered as a result of the lesion of the uterine wall are not met. We believe the cases resulting from trauma are entirely different from the others.

The associated toxemia, eclampsia, or nephritis has been found so frequently associated with the lesion that it cannot be entirely disregarded as yet, at least as a contributory factor. However, sufficient cases occur without any rise in the blood pressure or albuminuria, that cer-

tainly they are not essential for the occurrence of uteroplacental apoplexy.

The theory, supported by Morse and Young, that the hemorrhage is the result of venous obstruction has points both for and against it. It seems logical, for Morse has produced the identical lesion in rabbits by ligating all the veins draining one uterine horn. Ligation of only one or two of the three fails to produce more than a congestion. Since nothing short of complete obstruction produces the lesion, Willson says, "only serves to negative the hypothesis it is supposed to prove." In spite of this it hardly seems fair to disregard Morse's work, since, for all we know, a complete obstruction to the venous return may not be necessary in the human, and certainly would not be necessary if in addition there was the toxin of Willson. Young demonstrated that an extensive and fairly old standing thrombosis was found in the ovarian vessels on each side. The uterine vessels were normal. Against this theory is the fact that such obstruction has not been regularly found, even though, according to Willson in several cases of his series, careful examination of the large veins was made. This was true also of two cases reported by Williams. Future observations with this in mind, in those cases where careful study is possible, may throw further light on the subject. At present, however, since the identical lesion has been produced experimentally by obstructing veins, even though there is some clinical evidence to the contrary, this theory should be considered.

There is still another theory that changes in the vessels caused by toxin might be responsible. Williams studied two cases very carefully and described swelling of the intima of the smaller arteries, and in addition he says, "the finer architecture of the vessel wall was disturbed, and peculiar defects were seen which appeared as clear, circular or elliptical zones, while in other places the granules were found which stained very intensely with hematoxylin." Throughout these areas nuclear fragmentation and atypical arrangement of the cells was observed. These are the same changes described by Goodall in the puerperal uterus, and found also by Schwarz and McNalley in uteri before term. In addition, Williams also found free hemorrhage in the walls of some of the larger veins just beneath the endothelium and communicating freely with the hemorrhagic effusions between the muscle fibers; also defects in the intima of the larger arterioles which may have been connected with the hemorrhagic areas in their vicinity. He was unable to find similar lesions in the larger branches of the uterine artery. Here then, we have demonstrated defects in the vessel walls

to account for the escape of blood, and Williams believes they are toxic in origin, due to some substance circulating in the blood which possibly produces changes that permit the escape of blood into the tissues, just as observed in certain varieties of smoke poison.

Willson's idea is very much the same, for he says, "The elaborate studies of venom made by Flexner and Noguchi have demonstrated that these poisons contain protein toxins capable of producing hemorrhage by a variety of mechanisms, namely, by inhibiting coagulation, by producing thrombosis, and by endothelolysis." Some cases do have coagulation inhibited, such as our second case. De Lee reports a fatal case associated with a hemorrhagic diathesis, where even so slight an injury as a hypodermic injection caused rather extensive infiltration of the tissues with blood. Willson mentions cases with ecchymosis of the skin, bleeding from slight abrasions, etc. However, by no means do all cases reported show this bleeding tendency. In our case of concealed hemorrhage it was absent. Thrombosis of the smaller veins is a common finding. Young's case showed it of the ovarian veins. This again fits in with the theory of Willson. Williams' cases also support this view. Since the most extensive lesion is at the placental site, Willson feels that the placenta is in some way concerned in the production of the theoretical toxin responsible for the lesion.

In 1923 the writer, with O. H. Schwarz, described changes in the uterine vessels occurring chiefly near term, which were identical with those described by Goodall in the post partum uterus. Briefly, these changes were, narrowing of the lumen of the arteries by intimal proliferation, and a degeneration of the elastic tissue plus a hyaline degeneration of the remainder of the vessel wall. The statement was made then that, in the majority of cases of uteroplacental apoplexy, there is already a hypertension of varying degree. Add to this the increased tension that must occur proximally to the narrowing or obliteration of vessels, whether artery or vein, which we have shown, and the weakening of the vessel walls from the degenerative changes, and conditions are made ideal for the rupture and subsequent extravasation of blood. The extent of the lesion would depend on the site and size of the ruptured vessel. More careful consideration of the lesion of uteroplacental apoplexy, however, convinces me that the rupture of a single vessel could not cause the extensive bilateral ecchymosis often present; a single large hematoma would be more likely. There must be blood escaping from many places, even in tubes and ovaries, to account for the lesion.

The most recent contribution to our knowl-

edge of the etiology is found in a preliminary report by Hofbauer and Gerling in the experimental production of uteroplacental apoplexy in cats and guinea pigs. Assuming that the condition was due to a toxemia, they injected histamin intravenously or intracardially in ten guinea pigs and ten cats. On account of the difference between the human placenta and the placenta of these animals, they did not expect to produce the identical lesion. The animals, immediately on injection, showed a tetanic contraction of the uterus, with immense engorgement of its vessels and those of the broad ligament, and the animals went into shock with a marked fall in blood pressure. In the guinea pig they found some separation of the placenta but not in the cat. There was hemorrhage extending along the course of the blood vessels in the decidua and marked edema of the uterine wall, but no hemorrhage. Thrombosis of veins in the decidua was also present. In the liver they found peripheral necrosis and thrombosis. They say: "The results obtained are in harmony with the recent tendency pointing to the association of premature separation of the placenta with a toxemic process and indicate that a sudden access of histamin to the circulation of the pregnant woman might well account for the sudden appearance of the accident in question, with its train of alarming symptoms. In a more extended paper, with illustrations, the organic lesions will be described in detail, and reasons will be adduced which may afford a theoretical possibility for the sudden appearance of histamin in the pregnant woman."

Wall Building.

POSTNATAL RETRODISPLACEMENT OF UTERUS*

WITH SUGGESTIONS AS TO THE PREVENTION AND MANAGEMENT

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AND

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Pregnancy with its destructive processes is so frequently the cause of uterine displacement that it becomes the responsibility of the obstetrician to institute measures to reduce so far as possible the occurrence of the displacement. To what extent this can be accomplished depends entirely upon the knowledge possessed as to the causative factors. If the cause is not vested in the supporting structure, viz., uterine ligaments, pelvic fascia, and perineum, then it

must be looked for in such conditions as separated recti muscles with the attending change in intra-abdominal pressure, inflammation, developmental defects, and tumors. Several of these factors may be present at the same time.

Lynch examined 1230 women six weeks after delivery and found 505 cases of retrodisplacement, a percentage of 41.1. Krebs found it present in 31 per cent. of 100 clinic cases and 30 per cent. of 150 private cases. Lankford found 24 per cent. in 300 cases. Kelly, Williams, Newell, Sturmdorf and others found an incidence of from 14 to 30 per cent. in the general run of gynecological cases; which would seem to indicate that a large percentage of the cases caused symptoms severe enough to warrant the gynecologist's services.

From a study of the records of 1366 pregnant women, 519 presenting themselves for postnatal care, we were able to arrange the following data: One hundred forty six, or 28.1 per cent., had a retrodisplacement of some degree. Of 209 white women 65, or 31 per cent., had displacement while of 310 colored women 81, or 26 per cent., had the uterus in backward position. Thirty four of the 146 cases were after the first pregnancy, 32 after the second, 55 after the third to sixth, 21 after the sixth to ninth, and four after ten or more. Forty four were under twenty years of age, sixty nine between twenty and thirty years, twenty two between thirty and forty years, and eleven over forty.

One hundred forty two, or 97 per cent. had separated recti muscles with relaxation of the anterior abdominal walls and therefore a change in direction of intra-abdominal pressure, while only four had recti intact and firm abdominal walls. Twenty six, or 18 per cent., showed perineal relaxation. A study of the above figures would seem to indicate (1), that at least one out of every four women has displacement after childbirth; (2), that colored women are affected less than white women by pregnancy and delivery (3), that a large percentage occurs after the first pregnancy, and that in others seen after a later pregnancy it may have occurred following the birth of the first child; (4), that age does not appear to be a factor, for while a large number were under thirty years, most deliveries occur before that time; (5), that separated recti muscles with relaxed abdominal walls and altered intra-abdominal pressure was present in 97 per cent. of the cases.

This close association would indicate that a change in intra-abdominal pressure is a contributing factor in the production of retrodisplacement. It certainly is correlated with displacement in the causation of backache, for how frequently do we replace a uterus by

*Read before the St. Louis Medical Society, January 12, 1926.

operation, pessary, etc., only to have the patient complain of the same dragging ache in the small of the back? A properly fitting corset with exercises promptly stops the ache, which was not corrected by the operation or pessary. This brings up the question of proper support of the abdominal muscles during pregnancy and early abdominal exercises following delivery. We heartily advocate and support these ideas. Relaxed perineum cannot be considered as seriously affecting the frequency of displacement as it occurred in only 18 per cent. of our cases while 82 per cent. had good pelvic floors.

TABLE 1.

No. of pregnancies	1366
No. of postnatal examinations	519
Retrodisplacements	146
Percentage	28.1

TABLE 2.

	White	Colored
Examinations	209	310
Displacements	65	81
Percentage	31	26

TABLE 3.

	Displacements
Para 1	34
2	32
3-6	55
6-9	21
104	4

TABLE 4.

	Displacements
Ages 15-20	44
20-30	69
30-40	22
40+	11

TABLE 5.

	No.	Percentage
Associated lesions		
Diastasis recti	142	97
Lacerated perineum	26	18
Ventral hernia	5	3½
Fibroid uterus	3	2

Beal found the same percentage and claims that unless there is a short anterior vaginal wall which exercises an upward pull on the cervix, retrodisplacement does not occur with lacerated perineum. Over 95 per cent. of all cases attending the Cass Avenue Prenatal Clinic are delivered in their homes by medical students and represent a class of normal cases terminated by spontaneous delivery, therefore one might consider an incidence of 28 per cent. as being lower than occurs in the general run of hospital cases where obstetrical operations are frequently done. All of our patients are of the working class, many of them returning to the washboard within two weeks following delivery; this, and the fact that most of the women are too poor to procure proper abdominal supports during pregnancy, may be factors in the frequency of diastasis of the recti muscles.

All patients are advised to return for postnatal examination at the end of six weeks. We feel that this is the ideal time to institute pessary treatment if the uterus is found backward and is replaced. Earlier insertion of the pessary may cause undue stretching of the vaginal walls (because of the softness and the subinvolved condition of the tissues), and thereby produce cystocele and rectocele.

In conclusion, we would urge proper prenatal supervision with an abundance of rest frequently taken during the day and a properly fitting support which should be worn throughout pregnancy; proper abdominal exercises instituted soon after delivery; repeated postnatal examinations to determine the position of the uterus and replacement with pessary treatment of all displacements found. (Operation should be postponed to the time when the woman has passed the child bearing stage, or where some other complicating condition warrants it.) A proper support should be worn following confinement until the time when abdominal exercises have restored the tone of the abdominal muscles.

Lister Bldg.
Missouri Theater Bldg.

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ENDOCERVICITIS

ITS PREVENTION AND EARLY TREATMENT BY THE CAUTERY

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Linear cauterization for endocervicitis has frequently been mentioned in the literature since Dickinson's original article¹ but the method, while widely used by gynecologists, has not won recognition where its usefulness is

1. Dickinson, Rohert C.: *Am. J. Ohset. & Gynec.* 2:600. December, 1921.

greatest. I wish to stress three points: (1) The cautery is by far the best instrument we have for the treatment of a diseased cervix. (2) It is especially suited to the needs of the obstetrician and general practitioner. (3) It is an office treatment easily learned.

The body of the cervix is made up of muscular, elastic and connective tissue and is closely associated with the uterus and adenexa by a rich blood and lymphatic supply. The lining of the cervical canal, or endocervix, is a true mucous membrane consisting of a single layer of columnar epithelium, arranged in folds on the surface and extending down to form racemose glands. The secretion of the endocervix is alkaline. The vaginal portion of the cervix is covered with stratified squamous epithelium. The reaction here is acid. The structure of the endocervix renders it notoriously unable to rid itself of infection once it has gained a foothold, and it should show us the futility of trying to cure an infected endocervix with surface applications and a placebo, in the form of a vaginal douche. It continues for many years to act the part of a sheltering host to the invading organisms with only an occasional interruption from a pregnancy or a course of local treatments. Such an infected cervix is a distinct menace during labor. Tears, even though slight, through this infected field in the rapidly dilated cervix of a multipara, undoubtedly give rise to many of the unexplained postpartum febrile reactions.

POSTPARTUM ENDOCERVICITIS

Every cervix should be examined six to eight weeks following childbirth. When exposed with a speculum the postpartum cervix is usually found to have a laceration of some degree. It may have a bluish, congested appearance, due to poor tone in slowly recovering pelvic tissues, and more or less of the red endocervix is visible. Besides an increased blood supply, we have a mucous membrane which normally is well protected and covered by alkaline mucus, exposed to irritation by an acid medium containing many bacteria.

The result is swelling with eversion, hypertrophy and hyperplasia. The single layer of columnar epithelium may grow out and replace the squamous epithelium, producing the so called erosion. The erosion is red and bleeds easily because it is vascular, newly formed tissue, covered with a single layer of epithelium. The result of this situation is a hypersecretion of mucus, interpreted by the patient as leucorrhea.

This cervix is potentially a chronically diseased one, but its course is many times altered by applying 15 per cent. silver nitrate to the hypertrophic area and prescribing hot astringent douches, such as zinc sulph. 1:500, to be used

just before retiring every night. If there is not decided improvement in two weeks, then the cautery is in order.

CHRONIC ENDOCERVICITIS

Low grade infection sets in when toleration for the ever present bacteria is reached. The surface takes on a granular appearance as the epithelium is thrown into folds, drainage of the deep glands is occluded by edema, with formation of cysts, and infection spreads into the lymphatics of the uterus and the broad and uterosacral ligaments. The onset is gradual, in contrast to salpingitis, where attacks of acute low abdominal pain are the rule. In addition to the leucorrhea, the patient now has backache, feeling of weight in the pelvis, nervousness and, as the patient expresses it, "has had female trouble ever since the baby came." This condition is a prolific source of popularity of the advertised cures of "female trouble" and candidness forces us to admit that the time honored local applications and douches are almost as hopeless as internal therapy. Removing the tubes and the ovary which seems to be excelling in the accumulation of Graafian follicle cysts, ignoring the original focus of infection, gives some relief until the usual routine is resumed, when the trouble returns. The same applies to post abortive streptococcal infection, with a small external os. Gonorrheal infection is more apt to run the classical course. While the cautery is not a panacea, it is by far the best we have at the present time for the treatment of this condition.

TECHNIQUE

The cervix is exposed with the ordinary bivalve speculum. Mucus is thoroughly removed with a very thin paste of soda bicarbonate and peroxide. Cocaine in 10 per cent. solution is applied and, if the surface bleeds easily, an equal amount of adrenalin may be added to the cocaine. A small cautery wire at white heat is used. A heavy cautery is painful and causes scarring by burning too deep and destroying all of the epithelium rather than the diseased part only. On each lip of the cervix two to four lines are burned at one-fourth inch intervals, and about one-eighth inch deep, beginning well up in the cervical canal and extending to the outer margin of the red area. Experience with exposed areas tells us about how much to cauterize through a small os. The patient should be told that she will have a profuse watery discharge for a few days, then it will become thicker and gradually subside in three or four weeks. By being conservative, as many as three treatments at intervals of a month, may be necessary, but no troublesome scar will result. Erosions disappear and the

mucous membrane recedes to the normal position with an apparent narrowing of the external os until the cervix looks practically normal. Cauterization should precede repair of deep lacerations, and its use will change your opinion as to the advisability of repair in many cases. A large opening into a cyst permits the cavity to shrink and become filled with squamous epithelium. Polyps, a result of endocervicitis, are easily removed by this means.

This treatment comes nearest to restoring the normal physiology of the cervix. The abundantly satisfactory results are often discouraging to us, whose ambitions are surgical, but the patients do not complain of this so long as they are relieved of their symptoms.

1808 Federal Reserve Bank Bldg.

A DISCUSSION OF MEDICAL TESTIMONY IN CRIMINAL TRIALS*

WITH REPORT OF CASES

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This is not a criticism of individual physicians but of a system of practice which is common not only in our own community but in practically every community in the United States.

It is not every physician that can qualify as a mental expert or as an alienist, and by the same token it is not every physician that will be called upon to testify in criminal trials. Still it is my opinion that every physician is, to some degree at least, interested in the character of testimony that is offered by those physicians who do so testify in behalf of the defendant or the state in these cases. The testimony of physicians or so called alienists for the defense in criminal trials has done much to lower the prestige of the entire medical profession. It has done much to destroy the confidence of the public in the honor and integrity of the medical profession. The chief asset of the doctor is the confidence of the public. Are we retaining that confidence when lawyers say, and I have personally heard many of them say, that doctors who are rated high in medical ability, members of the Jackson County Medical Society, will testify to anything for which they are adequately compensated, perjure themselves for a price? Are we retaining that confidence when jury after jury in criminal trials emphasize the fact that they paid no attention to the medical expert testimony introduced in the case? In one criminal trial recently in the courts of Jackson County the jury stated that they did not

believe the medical testimony because some of it seemed to be commercialized; in another, after days were spent in introducing medical testimony, the jury stated that they were not influenced by the medical testimony in reaching a verdict. In a criminal trial recently held in Jackson County, a very large panel of jurors was drawn and examined before a panel of twelve men could qualify to try the case. Something over 140 men were examined. Of that number approximately 50 per cent. were rejected by attorneys for the defense because they said they would not believe medical expert testimony. Such an attitude on the part of the jurors is but an index of the attitude of the public generally, and it reflects upon every member of the medical profession. If the public believes that medical men will perjure themselves for a price how can we expect them to believe the statements we make when off the witness stand?

I do not say that members of the Jackson County Medical Society have deliberately perjured themselves in giving testimony in criminal and civil trials, but it cannot be denied that a considerable part of the public are of the opinion that perjury, just common ordinary lying, or grossly distorting the truth, is a common practice by members of our Society when giving testimony in courts of record.

Professional men are very prone to become partisans on the witness stand. All red-blooded men when they become participants in a fight, whether it be a court fight or some other kind of a fight, have a burning desire to see their side win, and then too the reward of a winner is usually greater than that of a loser. I refer to the monetary reward. These two influences operating together cause professional men oftentimes to seek to cover up facts or twist the facts to suit their side of the case. It causes the medical witness to overemphasize symptoms and facts favorable to his client, to give importance to symptoms of no importance, and to give enthusiastic aid to the attorneys for his client in his efforts to confuse and create a doubt in the minds of the jurors. He makes statements in an attempt to prove his side of the case that he would not dare make before a body of medical men. I have many times stated that in my opinion no medical man should make a statement before a lay jury concerning a medical subject that he would not be willing to make before a group of medical men, and that is the position I am taking in the presentation of this subject.

I shall briefly report some concrete cases that have been tried in the criminal courts of Jackson County, giving a summary of the medical testimony as offered by the defense. I shall not mention the names of the defendants or of

*Read before the Jackson County Medical Society, February 2, 1926.

the doctors testifying. You will please note that every crime in the cases reported was committed for a definite and specific purpose. None were purposeless acts as are so frequently the crimes of the insane and epileptic.

REPORT OF CASES

Case 1. A man employed in a newspaper office received notice that he was to be discharged. He conceived the idea that another man in the same office with whom he had had some actual differences was responsible for his discharge. He went to the office armed, shot to death this other man who was unarmed, voluntarily surrendered himself to an officer representing the law, was brought to trial, his attorneys offered a plea of insanity, doctors testified that he was insane, a hopeless paranoiac, although he had shown no symptoms of insanity prior to the crime or subsequent thereto. The jury acquitted him on the grounds of insanity. He was sent to a State Hospital, stayed there for a few weeks, was discharged as not being insane, re-engaged in the newspaper business, resumed the normal and sane activities of life which were only interrupted by his trial and his brief stay in the State Hospital.

Case 2. A man had domestic difficulties—he believed another responsible, in a measure at least, for his trouble with his wife—he went armed to the other man's office, found him unarmed, shot him to death, voluntarily surrendered himself to an officer, knowing that he had committed a crime against the law and that the officer represented the law. His lawyers arranged an insanity defense for him, employed doctors willing to testify that he was insane at the time he committed the crime. These doctors testified that he was a paranoiac, a hopeless paranoiac and an incurable paranoiac. The jury believed them, acquitted him on the grounds that he was insane when he committed the crime. He was sent to a State Hospital where he remained a few weeks, during his stay there acting as assistant bookkeeper for the hospital. He was then discharged as not being insane. This man's sanity was never questioned prior to the time he committed the crime nor subsequent to his discharge from the State Hospital. After he was discharged he resumed the normal and sane activities of life.

Case No. 3. A man had had business difficulties with some men with whom he had been associated in business. He met an employee of these other men who was unarmed, unable to offer any resistance, shot him to death, hunted up a policeman, surrendered himself and his gun, knowing that he had violated the law and that the policeman represented the law. His lawyers knew that his only defense was insanity; they employed doctors to testify that he was insane, these doctors testified that he was a hopeless and incurable paranoiac and should be sent to a State Hospital and confined there for the rest of his life. The jury acquitted him on the grounds that he was insane and recommended that he be sent to a State Hospital for the rest of his life. He was sent to a State Hospital, was there 27 days when he was released on a writ of habeas corpus. Six weeks after his release from the State Hospital some of the doctors who testified at the time he was on trial in the criminal court testified before a probate judge that he was no longer insane but had made a full and complete recovery from a psychosis which they had previously testified was hopeless and incurable. The probate judge then found him to be sane and he was released from all custodies of the court, free from the charge of murder, free from the charge of insanity which

was of no further use to him since it had served its purpose.

Case No. 4. A man shot to death his wife because she refused to live with him. He knew he had committed a crime against the law and surrendered himself voluntarily to an officer of the law. His lawyers prepared a plea of insanity for him. The testimony offered was that he was subject to fits of depression, that he had inherited these fits of depression from his father who was a confirmed drunkard, that he would sometimes cry, that he had disappeared occasionally for a period of time and when he returned represented that he did not know where he had been, but no evidence was introduced that he had ever been accused of being insane. He had been quite regularly employed in positions of responsibility, being a printer by trade. His memory was good, his mind was clear on all points and subjects before and subsequent to the time in which the shot was fired that killed his wife. He alleged that he had no knowledge of firing the shot yet he went to the place where his wife was staying, armed with a gun for the purpose of killing her if she would not return to his home. He was convicted and sentenced to life imprisonment.

Case No. 5. A young man who alleged a few attacks of epilepsy, with a companion held up at the point of a gun another young man who was out driving in an automobile with a young woman. They forced the companion of the young woman from the car, appropriated the car and kidnapped the woman, drove to a lonely spot and forcibly assaulted her. The man who alleged epilepsy was arrested, his lawyers, aided by medical testimony, attempted to prove that the defendant was epileptic, therefore insane, advancing the theory that all epileptics are insane. It was alleged that this young man had had three attacks of epilepsy over a period of several years,—all major attacks. The inconsistency of contending that all epileptics are insane was demonstrated by them using the father, who alleged that he had had epilepsy for twenty years, as a witness for the defense. This man at no time during his entire life prior to the crime had been accused of being insane. He was convicted and sentenced to 35 years in the penitentiary.

Case No. 6. A man with some previous criminal record threw a stone through the window of a jewelry store in Kansas City, grabbed some jewelry and fled. The chase ended in his capture. At the trial his lawyers entered a plea of insanity for him; testimony was offered that he had episodes in his life of mental depression, that at times he was a little peculiar in his conduct. While in jail he pretended to attempt to kill himself by throwing himself down stairs. This man had shown no evidence of insanity prior to the commission of the crime. His conduct following his arrest as observed by those who had him in charge while he was in custody was that of a sane man. He conducted himself as a sane man while in the court room during the period of his trial. The crime was well planned and well executed but he slipped up on his getaway. He was caught with the goods on him, his lawyers aided by their hired doctors were convinced that there was but one chance of his escape and that was through the insanity plea, but they were not successful in convincing the jury, therefore, he was convicted.

Case No. 7. A man came to Kansas City who had some experience in forgery. He visited one of the banks and got a cashier's check. He successfully forged a considerable number of these checks—did it so successfully that he was able to fool other bankers. The planning and execution of this crime required a high grade of intelligence and could only

have been done by a man whose mental faculties were working normally. He succeeded in getting a considerable sum of money from the banks of this city and made his escape before the forgeries were detected. He was arrested months later in a distant city and returned to Kansas City for trial. He was identified by the bankers and employes of the various banks from which he obtained money on the forged checks, so really there was no good reason for his denying that he committed the crime which he admitted and plead "not guilty." His attorneys then built up an insanity defense. They hired doctors, alienists, to help them. It was discovered that in the years previously this man had received an injury which fractured his skull and, according to his statement and the statement of interested relatives, he had some spells which may have been epileptic in character. This was recognized as being a good foundation for the insanity plea. They did not try to prove that the defendant had forged the checks, successfully obtained the money upon them and made good his escape while having an epileptic fit or while in an epileptic automatic state, but contented themselves with testifying that in their opinion no man who had had a fractured skull and who had had some epileptic fits could possibly be sane and responsible for his crime, it mattered not how shrewd and intelligent his conduct and conversation might be. The jury didn't take the testimony seriously and convicted the defendant.

Case No. 8. A trusted employe and officer of a Savings and Loan Association of Kansas City appropriated a large sum of money from that organization. He had charge of the funds and securities so that for a considerable period of time by means of forgery and duplication of securities he was able to prevent other officers of the organization from discovering his peculations. Finally he was caught, arrested, and brought to trial. He could not deny that he had robbed the company but pleaded "not guilty" and his attorneys, aided by hired doctors, built up an insanity defense. He had not been previously arrested nor had he been accused of being insane. In fact his business associates, all good level headed business men, had placed him in this position of responsibility, regarding him as an intelligent man. Some of the best business men of our city had been intimately associated with him in the management of the Savings and Loan Association. No evidence was introduced that any of his intimate friends, members of his family or business associates had at any time questioned his sanity. Up to the time of his arrest he was active in the management of the affairs of the company, went to his daily duties as he had been doing for years. After his arrest he was bonded, he was not locked up in a hospital for the treatment of mental cases but continued to mingle with his family and friends as he had done previously. At the trial evidence was introduced that for sometime previous to the discovery of the fact that he was robbing the company he would at times seem to be inattentive, rather abstracted, a little moody at times, apparently worried about something, would start a sentence and not complete it. These episodes were introduced as evidence of his insanity. Of course during the time that he was moody, seemed to worry about something, a little inattentive, rather abstracted in his attitude, he was robbing the company, but the final and conclusive evidence of insanity, the real evidence was this—that he was examined by one of the doctors testifying, in the time intervening between the arrest and his trial. As a part of that examination a spinal puncture was done, a fluid pressure was taken. Testimony offered was that the fluid pressure was 350 millimeters of water, while the patient was in the

sitting position, and testimony was given that that pressure was so abnormally high that an individual having this brain pressure was incompetent and irresponsible because it would be impossible for a brain under such a pressure to function normally.

The defendant's lawyers and hired doctors tried to put that over on the jury. It is a fact well known that the normal pressure is 75 to 200 millimeters of water while the patient is in the recumbent position. In the sitting position the pressure is from two to four times greater than in the recumbent position, therefore, the normal pressure of the average adult in the sitting position is from 200 to 450 millimeters of water. So in reality the defendant's fluid pressure was the average pressure of the normal adult. The jury didn't take this testimony seriously and the defendant was convicted.

Case No. 9. A man was manager of a club. The board of directors became displeased with his management. They were planning to discharge him and replace him with some other manager. He walked into the office where the directors were holding a meeting, shot to death one member of the board of directors and attempted to kill the others. None of the directors were armed therefore they were unable to defend themselves. He used dum dum bullets in shooting at the directors; he then shot at himself, giving himself a flesh wound, but used a steel jacketed bullet in his pretended attempt at suicide. He was arrested and brought to trial. He admitted the shooting but through his lawyers pleaded "not guilty." His lawyers realized that there was but one chance of him escaping punishment for his crime and that was to convince the jury that he was insane at the time he did the shooting. They hired several doctors to help in the defense. Much testimony was introduced that this man was eccentric; that he wore peculiar clothes; that he had a violent temper; that he was temperamental; that his ears were not the same size; that his head was a little asymmetrical; that he was a paranoiac and had delusions of persecution, although his so called delusions were founded upon the fact that the board of directors were displeased with his management, were investigating his management and contemplating discharging him as manager. If this man had been insane he would not have known whether the directors were criticizing his management or commending him. He would not have known whether the directors were planning to discharge him or give him an increase in salary. He did know the nature and quality of the directors' acts, therefore, he must have known the nature and quality of his own acts. Again in this case no evidence was introduced that this man had ever previously been accused of being insane. He was looked upon as peculiar. The jury is not interested in the kind of clothes that a man wears, they are not interested in the size of his ears or the shape of his head but are interested in knowing whether or not a man who kills, deliberately kills, an unarmed man, knows that he is killing and knows that he is violating the law when he does kill under these circumstances. This man was convicted. He is at liberty on bond pending his appeal to the Supreme Court, and is not confined in an institution for the insane, nor has he been confined at any time.

Case No. 10. Two men had had some trouble previously, had an altercation in a business office which they shared mutually, one of them was shot to death. The one who did the shooting related the circumstances of the trouble up to the time and after he pulled the gun from his pocket. He said that his mind then became a blank and he did not remember pulling the trigger. Two defenses were offered in this case—self-defense and insanity. His

attorneys, who were able and many, delayed the trial for approximately three years. They employed a number of doctors to help convince the jury that the defendant was insane. A hypothetical question was submitted to these doctors which required approximately six hours for one of the attorneys to read. It took several days to introduce the medical testimony for the defense. An attempt was made to show that the defendant had been subject to epileptic attacks, and this formed the basis of the insanity defense. In spite of the fact that no real evidence was introduced that would convince a qualified medical man that the defendant ever had had a real epileptic attack, the doctors testified that not only the defendant was in an automatic epileptic state when he did the shooting but that his victim was also in an automatic state, although they were alone in the room when the shooting was done, no witnesses being present. No evidence was introduced that the defendant had ever been treated for insanity or epilepsy prior to the tragedy. After the tragedy he was examined by the medical witnesses. One of them testified that he performed an operation upon the defendant's brain, which not only relieved him of his epilepsy but of his insanity also. Much was said in the opening statement of the attorneys for the defense concerning a wonderful operation that had been performed on the brain of the defendant by one of the medical witnesses. The defendant's interests could be best conserved by not only convincing the jury that he was insane at the time the crime was committed but also that he had made a complete recovery since that time. The attorneys for the defense in their opening statement, alleged that they would prove that their client was suffering or found to be suffering some months after the date of the crime with a brain pressure which was so great that his brain could not properly perform its function, and that by an operation upon his brain this pressure was relieved, and so successfully did it relieve this pressure that he was quickly relieved not only of his alleged epilepsy but of his mental aberration as well. A medical witness for the defense testified that many months after the date of the crime he examined the defendant and by various tests, one of which was the examination of the fundi of the defendant's eyes, found that he was suffering from a high brain pressure, and that he performed an operation which relieved this brain pressure, relieved the defendant of his epilepsy and restored him to approximately a normal mental state. The instruments with which this operation was performed were exhibited to the jury and in great detail the various steps of the operation were described to the jury. The instrument with which the brain pressure was measured was also exhibited. Now what was this operation which relieved this high brain pressure and so miraculously relieved the defendant? Gentlemen, it was a spinal puncture. The witness testified that this spinal puncture was done by a needle which he exhibited to the jury and the pressure was taken by a manometer which he also exhibited. He testified that the puncture was made while the defendant was in a sitting position, and that the pressure of his spinal fluid measured by the manometer was 305 millimeters of water pressure. He also testified that 40 cubic centimeters of cerebrospinal fluid was withdrawn. That this withdrawal of cerebrospinal fluid permanently removed the pressure from the patient's brain and that as a result of this operation the patient was relieved of his epilepsy and restored to approximately a normal mental state.

Now let us analyze this testimony briefly. In the first place was this defendant suffering

from brain pressure? According to all writers on the subject the cerebrospinal fluid pressure of the average normal adult in the recumbent position, which is the only position in which fluid pressure can be correctly or should be measured, is from 75 to 200 millimeters of water pressure, while if the pressure is taken in the sitting position it is from 2 to 4 times as great as the pressure in the same individual in the recumbent position. The pressure of the average normal adult in the sitting position varies from 200 to 450 millimeters of water pressure. A pressure of 305 millimeters of water pressure is below the average normal. This is in accordance with all writers on the subject and is in accordance with my own experience and observation. The cerebrospinal fluid pressure of this defendant was slightly below the average normal. The average quantity of cerebrospinal fluid in the normal adult is 60 cubic centimeters. If 40 cubic centimeters were withdrawn by this spinal puncture, approximately two-thirds of the cerebrospinal fluid of this defendant was withdrawn at one sitting. The choroid plexus could have replaced the fluid withdrawn in less than 24 hours so the pressure on the following day would have been as great or even greater than at the time the puncture was made.

In my opinion the greatest miracle associated with this operation was that 40 cubic centimeters of fluid, or two-thirds of the normal amount, could be withdrawn from an individual in the sitting position with a pressure of 305 millimeters of water pressure and the individual survive the operation. Even though there should have been a high fluid pressure much above the normal, as is oftentimes found in epileptics, has anyone ever reported the cure of an epileptic by one spinal puncture or by a thousand spinal punctures, to the Jackson County Medical Society, or has anyone read in all medical literature a report of a case of epilepsy cured by spinal puncture? I have repeatedly punctured many epileptics but have seen no results in the lessening of the number or severity of the attacks. Many writers, Tissot and Bing among them, have reported on the subject and they all say that no favorable results have been obtained by one or more spinal punctures in the treatment of epileptics. The decompression operations of a few years ago were discontinued because no favorable results were obtained in epilepsy.

The medical testimony of the defense in this case was reported liberally in our daily papers, column after column was written upon it to go to all parts of our country for the laity as well as doctors to read; do you think that such statements being read by well informed physicians reflected any great credit upon the medical profession of Kansas City? The jury in this case

acquitted the defendant on the grounds of self-defense and stated that they gave no consideration to the medical testimony, because the medical testimony as offered by the state in rebuttal was diametrically opposite that offered by the defense. The statements made concerning the testimony in these various cases, excepting my own personal comment, can be verified by the court records of Jackson County. I have testified for the state in all but three of these cases and for the defense not at all. I have reported but a few of the more outstanding cases—there are many others in the court records in which the medical testimony, in my opinion, is as open to criticism as the medical testimony in the cases reported.

At the present time there is much discussion in public meetings, in the public press and by private individuals, of the crime wave that is sweeping this country. The problem is, "How can the situation be adequately met? What can be done to check this crime wave? How can the criminal be more successfully apprehended, and when apprehended how can he be more quickly and successfully dealt with so that he will no longer be a menace to society?"

No one will deny that our criminal laws are weak and ineffective. The criminal easily and quickly obtains bond. He may then continue his criminal career, and if again apprehended again is bonded. If beaten in the lower courts he appeals to the higher courts and while out on bond, pending his appeal, commits further crimes. Much maudlin sympathy is wasted upon the criminal even by some of our best citizens. The physician is supposed to be a good citizen but many physicians when approached by an attorney, or by a man accused of crime, are always ready to give aid and assistance. An attorney defending a man accused of crime is never at a loss in procuring the services of physicians to help his client escape punishment for his crime. When a man or woman accused of a crime has no other defense it has become a common practice to plead insanity as a defense. This is sometimes called "trigger insanity" or "insanity of convenience," and it is a sad commentary on the medical profession of our city that there is no case on record in Jackson County in which the defendant offered a plea of insanity that the attorneys for the defense were unable to employ medical men—so called experts or alienists to testify that in their opinion the defendant was insane at the time the crime was committed, the natural inference being drawn that the defendant should not be held responsible for the crime, should be released from the custody of the courts, should receive no punishment for his violation of the law, given his freedom so that he can commit further crimes at his pleasure. And,

gentlemen, some of the testimony introduced to prove the insanity of the defendant, testimony of capable and well qualified medical men, would be laughable if it did not so grossly reflect upon the medical profession and the entire membership of this Society. Much of it has been so ridiculous that it has helped to defeat its own purpose. The average juror has ceased to take it very seriously. I admit that there is considerable difference of opinion amongst medical men concerning the mental responsibility of habitual criminals. I further admit that many habitual criminals are morons, but it is unusual for an habitual criminal to plead insanity. In most cases where this plea is used the defendant is a first offender. He has up to this time been rated a good citizen. It is his first appearance in the criminal court as a defendant. He has up to this time been accused of no crime, nor has he been accused of being insane. He has not been treated for insanity and therefore his liberty has not been denied him for any reason whatever, nor his right to his liberty been questioned. He is frequently a successful business man, a man of education, a man of influence in his community. In a fit of passion, or for the purpose of revenge, or for the hope of financial gain he commits a felony. His attorneys confer together and prepare for his defense. He admits that he committed the crime but pleads "not guilty." After thoroughly analyzing the situation they decide there is only one chance of him escaping punishment and that is by convincing the jury that he was insane, irresponsible at the time the crime was committed. They interview doctors, arrange with them to testify in their client's behalf and they and the doctors begin industriously building up the defense. The attorneys borrow medical books from their doctor witnesses and the doctors tell them what to read, pointing out to them what will help and what will harm their case. They and the doctors together decide on what kind of insanity the client is to have. They usually pick on paranoia, or some form of epilepsy or epileptic equivalents—the twilight state, psychic epilepsy, petit mal, epileptic automatism, emotional insanity, or in some cases an ordinary brain storm.

Insanity, correctly speaking, is a legal term. According to the laws of our land an individual is insane if he is so deranged in mind that he is unable to distinguish between right and wrong or know the nature and quality of his act, or knowing the right is unable to refrain from doing the wrong. It is not an easy matter to give a medical definition of insanity. In my opinion the best definition is,—insanity is a prolonged departure from the individual's normal in thinking, feeling and acting. I want

you to note that word "prolonged." It means that in making a mental examination and determining the mental health of any individual at any time it is necessary to take a longitudinal section of that individual's life, and not a transverse. A study of episodes in any individual's life does not give you a true insight into his mental health. I mention this because episodes are so frequently used by doctors and lawyers in an attempt to prove the insanity of defendants. Evidence is introduced,—that on the Fourth of July, we will say, the defendant did a peculiar thing; on September 1 he did something else peculiar; on Thanksgiving Day he made some sort of a statement that didn't sound just exactly right; on Christmas he acted kind of funny and on January 10 he committed a crime. "Now doctor, in your opinion, taking all of these facts into consideration, was the defendant sane or insane on January 10?" And the doctor testifying for the defense answers, "In my opinion he was insane." This is not sufficient evidence of insanity. It is necessary that we know what he was doing, how he was acting, how he was talking between the dates mentioned.

If you desire to know of your own personal knowledge the condition of a highway between two given points you travel that highway longitudinally from point to point. You can learn very little about it by crossing it a few times between the two given points; then you only learn the condition of the crossroads. The same policy must be adopted in studying the mental health of any individual over any period of time. It has been my observation that in practically every case in which insanity is offered as a defense for crime the defendant has, until the crime was committed, attended to his usual business in a normal manner, filling business and social engagements, manifesting a normal attitude toward his fellows and members of his family, meeting his business associates in such a manner as not to arouse their suspicion that he was other than normal mentally, at no time has he been under treatment or observation for his sanity. He has not been suspected of being insane by his most intimate friends or members of his family who are his daily associates. Even after the crime has been committed if he succeeds in making bail pending his trial, he is not confined in an institution as an insane individual, but resumes the activities of his ordinary and everyday life, carrying on as he did before he committed the crime, reacting to his environment as a normal individual. The insanity defense originates in the fertile brain of his lawyer aided and abetted by hired doctors whose interest is not in seeing that justice is done, or that society is protected, but that the defendant escapes the punishment which he usually so justly deserves. Their in-

terest is in the protection of the criminal and not in the protection of society. If a really insane individual commits a crime his insanity is so obvious to all that it is not necessary for him to hire a corps of high priced lawyers and alienists to prove his insanity to a jury of twelve men. In the nomenclature of insanity, as I read it as written by Kraepelin, Bleuler and others, there is no type of insanity which manifests symptoms only while an individual is committing a crime, the individual being sane before the commission of the crime and after. This form of insanity is known only in criminal procedure. It is used by lawyers and their hired doctors when necessity requires. Is only discussed seriously in criminal courts. A case of this character has never been reported to the Jackson County Medical Society or any other body of medical men for discussion. There is no record of the presentation of such a case.

As stated above paranoia is often offered as a defense for crime. Paranoia is a definite type of insanity, has well defined and characteristic symptoms. Kraepelin says, a true paranoiac rarely comes in conflict with the law. He knows the law and fears the law; he may talk and threaten a great deal but rarely does he commit an overt criminal act. It is a progressive psychosis extending over a long period of time and is incurable. A man who kills another who has cheated him in a business deal or wronged him in some other manner, who has previously been classed as a sane man can correctly lay no claim to being a paranoiac. Epilepsy is also used as a defense for crime. Epilepsy and insanity are not synonymous terms.

The question may well be asked, what shall we or what can we do to correct a situation which has brought so much criticism and helped to lower the confidence of the public in the medical profession? Personally I do not believe in the type of insanity which afflicts an individual only while he is committing a crime, and for that reason I have declined to testify for the defense although requested to do so in some of the cases reported. I believe the doctor owes a larger duty to society as a whole than to any individual accused of a crime or who has committed a crime. I do not believe physicians should lend their aid to attorneys who are defending a man who has committed a crime, in building up a case of insanity, and I do not overstate the truth in saying that this was done in every case which I have reported at this time.

As I have stated previously it is my opinion that medical men before a lay jury should deal with medical facts as they would if every member of the jury were a well qualified medical man. It is my opinion that the laws governing criminal procedure should be such that no doc-

tor is called upon to become a partisan either for the defense or the state. Our laws should be so changed that if insanity is offered as a defense for crime a committee of medical men be appointed by the trial judge to report to the court on the mental condition of the defendant. If the defendant is found to be insane, commit him to a hospital for the criminal insane; and if found to be sane proceed to try him for his crime without medical witnesses appearing before a lay jury, for either the defense or the state.

The laws should be so amended that insanity cannot be used as a defense for crime. The definitely insane individual with criminal instincts is a much greater menace to the community than the sane individual, and anyone who is found to be definitely insane who has committed a crime should be confined for the protection of society. And, furthermore, I disapprove of the Jackson County Medical Society acting as a criminal aid society.

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TESTS FOR LIVER FUNCTIONS*

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Lack of time for this paper forces us to discuss so briefly the principles and practice of functional tests of the liver that we fear clearness will undoubtedly be sacrificed for brevity. For a proper evaluation of hepatic functional tests a thorough knowledge must be presupposed of liver functions, which are indeed numerous, more so perhaps, than any other single organ of the body. These functions are, so far as known, inseparably related to (1) Carbohydrate metabolism; (2) Protein metabolism; (3) Fat metabolism; (4) Production and excretion of bile pigment, bile salts, and cholesterol; (5) Detoxicating functions.

CARBOHYDRATE METABOLISM

It has been known to physiologists since Claude Bernard's monumental discoveries that the liver is the great warehouse of body sugars. It, with the muscles, builds up glycogen, stores it and from its supply insures normal glycemia, —a condition now known to be extremely essential to vital function. No more striking example of the value of experimental work has been shown than that of Mann's experiments of extirpating the liver: at first, *partially*, and thus proving that after extirpation of 70 per cent. or more of the liver, the animal was well cared for by the other 20 to 30 per cent. and in his second experiments, showing that *total*

extirpation of the liver ended in a syndrome similar to insulin poisoning, manifesting irritability, hypoglycemia, muscular twitching, convulsions, and death within ten to twenty-four hours.

Many tests of carbohydrate hepatic metabolism have been devised, some using glucose, others using sucrose, galactose, maltose or levulose. Of these all except levulose increase the blood sugar. MacLean has shown that 50 grams of levulose will not normally raise the blood sugar nor produce a glycosuria. Of some value, therefore, is this test, especially if biochemic tests control the blood sugar; if an increase of blood sugar, in excess of 20 milligrams per 100 cc. over the "conventional normal" exists, or if the curve is definitely prolonged it is assumed that hepatic function is impaired. It is found positive according to Finkelstein and others in acute and chronic cholecystitis, catarrhal jaundice, passive hepatic congestion, influenza, pneumonia and a few other conditions. This levulose test for hepatic function, we may say, is one of the more useful tests of liver function. It must be remembered, however, that its usefulness is impaired by (1) depending on urinary tests instead of blood chemistry for checks and controls; (2) that it is impossible to state how much the pancreas, pituitary or other organs are involved with hepatic disease; and (3) it tests only the carbohydrate relation to liver function and simultaneous maintenance or disturbance of other functions is assumed rather than proven.

PROTEIN METABOLISM

In the metabolism of proteins introduced into the blood stream by natural digestive processes, or as one of the amino acids administered experimentally intravenously, evidence has accumulated to indicate that the liver bears the burden of caring for these broken down protein products. They may be either rebuilt into higher protein bodies and stored in the liver as such, or more probably are broken down into urea and dispatched to the kidneys to be excreted. These two functions in dealing endogenously with amino acids of proteins are quite analogous to the hepatic function of building up glycogen from the enteric sugar and storing as glycogen, and later, on demand, returning it as sugar to the blood stream. Indeed, recent work by Markovitz would indicate that glycogen may arise not alone from sugar but in the normal process of changing fat and protein to carbohydrate. The experiments of Mann, alluded to above, give evidence that the function of the formation of urea is largely if not entirely hepatic. In this function of urea formation and associated renal excretion the

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liver is in reality a detoxicating organ transforming ammonium carbonate, a toxic body, into urea, a relatively innocuous product. In hepatic insufficiency of this ureogenetic function, certain types of diseases may be suspected by the relatively small amounts of urea excreted renally and the proportionally large amounts of ammonia in the urine. In phosphorous poisoning, for example, in pernicious vomiting of pregnancy, or in acute yellow atrophy, the nitrogen excreted as ammonia may be relatively quite high,—in the last named illness the ammonia having been found by one worker to be 70 per cent. of the urinary nitrogen excreted by the kidneys, while normally it may be only 3.3 per cent. The value of this differential study of nitrogen urinary excretion is reduced, when it is remembered that acidotic conditions, apparently quite apart from hepatic disorders, may have high urinary excretions of ammonia. Widal's hemoclastic test may be mentioned; it consists of giving 200 cc. of milk to a patient, who has been fasting, as a test for liver function. Clinically it has been found that leukopenia develops, and this has been considered evidence of anaphylaxis due to certain proteins having passed through the liver and having come directly to the circulation unchanged. In general, however, we may say, that though the liver is vital in its function of dealing with protein metabolism, tests of this hepatic function of practical clinic value have not been generally accepted.

FAT METABOLISM

There are, according to physiologists, three distinct types of fat in the body based on their ability to be oxidized: First, depot fat, or stored fat, poorly combustible. Second, hepatic, or relatively unsaturated fat, of higher iodine content than the "depot fat," being acted on by the liver. Third, fat acted upon by the liver which is more readily combustible than either of the others.

According to Leathes the liver is the half way house, which takes the stored body fat, that may be likened to wet gunpowder, dries it, and ships it to the tissues to be exploded. Another function controlling the fat of the body according to Whipple is the lipase content of the blood, which is very constant in normal conditions. In disease of the liver these fat splitting enzymes of the blood have been shown to be enormously increased. It may be possible that one hepatic function is to suppress the amount and activity of lipase. It is obvious that in many hepatic disturbances fat infiltration of the liver occurs, and the fat splitting enzymes in liver disease may be increased five to eight times the normal. While this has been

proved experimentally and is a promising field for study, no general use of this fact has been made by clinicians for testing this hepatic function.

BILIARY PRODUCTION AND EXCRETION

Bile excretion as an hepatic function has been known since the ancients. However, the source of certain of its elements is not so well known. Since green and yellow bile is found, as pointed out by Saunders over a century ago, in those animals and in only those that have red blood, it has been assumed, and supported by experimental evidence, that this function of forming bile pigment is one of utilizing decrepid red blood cells. Mann has shown conclusively in hepatectomized dogs that bilirubin may be found in the blood, and is therefore proven to be formed outside the liver. For purposes of functional study of the liver, the clinician properly relies upon excretion of bilirubin into the bowels as an index of normal excretory function of the liver, and interprets the bile stained urine and sclera as ample evidence for a diagnosis of biliary duct obstruction. This is a functional liver test honored by time, and it has not been superceded by any more practical method, however refined it may be by modern chemical methods. Modern quantitative biochemical methods, however, have utilized this abnormal distribution of the bile pigments in the blood and have made possible quantitative estimation of bilirubin in the blood stream (Van den Bergh). In complete common duct obstruction this may reach as high as 50 mg. per cent. or twenty-five times the normal maximum figure. It has been shown by Greene that this excretory function of the liver may be entirely destroyed for rather prolonged periods, while other functions, e.g., glycogenic, ureogenic and fat mobilization, may not be markedly disturbed. The same has been claimed by Greene and Rowntree as a possibility following delayed excretion of phenoltetrachlorphthalein in hepatic dysfunction.

Other important ingredients of the bile are the bile salts—glycocholic and taurocholic acid sodium salts, and cholesterol—and practical methods for quantitative estimation of these have been devised. The study of these and the pigments mentioned have been popularized recently by the work of Lyons and Meltzer with the duodenal tube as a method of study of hepatic function. There has been placed in the literature by competent observers such a wide variety, and such a marked difference of opinion as to its value, that one feels very conservative in accepting the play of colors as of established value. It has been discarded by certain clinics where operations have

checked sufficient numbers of cases to justify their conclusions. For those who have the time and patience to carry out the technical part of the procedure, it may add somewhat to their clinical data. Speaking with the authority of a physiologist, A. J. Carlson feels that the procedure has not a rational leg to stand on.

A fifth function of the liver is its detoxicating ability. Certain inorganic poisons, such as phosphorus and arsenic, seem to have specific affinity for liver cells; and certain organic compounds, notably chloroform, must be cared for in the liver, if anywhere.

It is probably because of this function of caring for a wide variety of organic and inorganic elements or compounds foreign to the body, that two tests have been discovered. Phenolphthalein, as has been recently mentioned, is almost identical to urea in certain physical respects. When, however, there is added a halogen atom and a sodium or calcium atom, the product may so nearly resemble a foreign toxin that the hepatic function of excretion is quickly called into play. The phenoltetrachlorophthalein test has been well evaluated by essayists. It will probably never be very popular if dependent on the duodenal tube because of the difficulties of application. When, however, it is checked by studies of the dye in the blood it becomes much more accurate, and may be of certain value in checking the ability of the liver to care for that specific dye. As has been pointed out by Rowntree, however, it has been shown that the test may be positive where the many other hepatic functions were not deranged since they do not necessarily run parallel to each other. A wealth of work on this must be forthcoming to have it materially aid modern clinical methods of diagnosis and treatment. Greene thinks this test, when positive, offers definite evidence for diagnosis in toxemias of pregnancy and very early jaundice.

The enthusiasm now everywhere evinced in the visualization of the opaquely filled gallbladder will undoubtedly soon give the profession valuable data concerning the anatomy and function of the gallbladder in life, which has hitherto been entirely beyond the methods of research to discover. Let us hope that it may lend to cholecystic diagnosis the accuracy an expert roentgenologist may assume with the opaque meal in lesions of the stomach and duodenum. Conservatism, however, leads us to be patient and remember that the true value of the opaque meal came after many years, and after enormous numbers of cases had been studied and operated. Every new light thrown on diagnosis of the right upper quadrant is,

however, most welcome and of the utmost value.

In conclusion, one may add that there is an enormous amount of work being done on liver function and the literature is voluminous. It would seem first, that the most valuable and accepted tests in general are those that are controlled by the study of the blood, namely, the levulose test, the bilirubin test quantitatively, and the tetrachlorophenophthalein test; and second, those not finding general acceptance, or upon whose value there must now be a suspension of judgment, are the Widal hemoclastic test, Lyon-Meltzer's duodenal study of the biliary excretion, Whipple's blood lipase test, and the quantitative study of the bile salts in the blood of jaundiced patients.

The test for visualization of the gallbladder and study of its function offers a fascinating field for research.

This paper would be incomplete, not to mention recent work by Major on the possibilities of the liver producing an internal secretion. Work is now being done intensively to ascertain whether an extract from the liver may not be of service in the control of hypertension. Claude Bernard's dictum that each organ is endowed with the function of creating internal secretions may yet be proven for the liver.

815 Shukert Building.

OVARIAN CYST COMPLICATING PREGNANCY

Report of Case

T. R. AYARS, M.D.,
ST. LOUIS

In October, 1924, Mrs. W. was referred to me by Dr. Ploehn for delivery. Examination revealed an apparently normal pregnancy of about eight months. The patient was 18 years old, well nourished, and the pelvic measurements were I. C., 29, I. S., 27, I. T., 31, Ext. Conj., 18.

I found nothing to indicate that she would have other than a normal delivery, so did not see her again until after she had entered the hospital. Upon examination, after several hours of slight pain, the cervix was found to be dilated to about the size of a silver quarter, but a mass in the culdesac prevented the head from entering the pelvis. The mass did not seem hard so it was thought that possibly when pains became more severe it might be compressed and permit the head to pass. The next day dilation had progressed very little and the head had not engaged. After consultation with Dr. G. A. Mellies, it was decided that the head could not pass and when efforts to replace the tumor above the entrance to the true pelvis had failed, a Cesarean operation was decided upon.

The Cesarean section was done and the mass in pelvis brought up which proved to be a cystic right ovary. The cyst was removed and the patient and her baby made an uneventful recovery.

The specimen was shown at the St. Louis Medical Society on November 18, 1924.

University Club Building.

THE JOURNAL

OF THE

Missouri State Medical Association

JULY, 1926

EDITORIALS

DR. JABEZ NORTH JACKSON

PRESIDENT-ELECT, AMERICAN MEDICAL
ASSOCIATION

The honor of selecting a member of the Missouri State Medical Association to be president-elect of the American Medical Association was conferred upon Dr. Jabez North Jackson, Kansas City, at the Dallas meeting last April. Dr. Jackson is eminently well fitted to discharge the duties of this important office for he has a highly trained scientific mind and wide experience as the presiding officer of numerous medical organizations.

Dr. Jackson's family has been prominent in the medical world for several generations. His father and two uncles were physicians, his father, Dr. John Wesley Jackson, being at the time of his death vice president of the American Medical Association. It was Dr. Jackson's father who founded the vast system of railway hospital associations now in existence when he was chief surgeon of the Missouri Pacific Railway with headquarters at Washington, Missouri, where in 1879 he established the first railway hospital.

Dr. Jabez North Jackson has been president of the Missouri State Medical Association, the Western Surgical Association, and the Medical Association of the Southwest and has served a number of terms as delegate to the American Medical Association from Missouri. He distinguished himself as a medical educator when he was dean of the University Medical College of Kansas City, and closed that school when the American Medical Association classified teaching institutions rather than conduct a second rate medical school.

The American Medical Association feels that under his guidance its affairs will be handled by one who is not only experienced in directing organization efforts, but is loyal and faithful to the tenets of the profession. Dr. Jackson is the fourth Missouri physician chosen for the high honor of president of the American Medical Association. Those who preceded him are, Dr. Charles A. Pope, St. Louis, 1854; Dr. John T. Hodgen, St. Louis, 1881; Dr. Elisha H. Gregory, St. Louis, 1887.

WILLIAM HAYS BREUER, M.D.

PRESIDENT, 1925-1926

In the election of Dr. William Hays Breuer, St. James, to the presidency of our Association the House of Delegates conferred the honor upon one who has discharged every obligation laid upon him not only with distinction to himself but with profit to the organization and the welfare of the members.

After locating at St. James in the practice of medicine, Dr. Breuer became a member of the Phelps County Medical Society and so active was he in organization work that in two years thereafter he was elected president of the county medical society. From that time until now he has shown his loyalty to his profession and the Association by innumerable acts of devotion to the cause and to the interests of the individual members and has been a leading factor in all the movements looking towards the advancement of the science of medicine as well as the application of these developments in private practice.

Dr. Breuer has many qualifications that make him ideal as a state medical leader. He has balance, broad vision, and open-mindedness. He is a composite personality for he knows the special needs of the rural sections as he has worked in that environment year after year. His academic associations, his education, and his broad experience, however, give him a rare understanding of the equally potent problems of the city physician. Then, too, he comes of a family long prominent in state-wide affairs.

Likeable qualities make him a leader among men and his appreciation of progress the aggressor in many forward-making medical movements. He has always considered loyalty to his associates before his own personal advancement. Upon more than one occasion he has declined honors, which might have been his, for the benefit of the Association as a unit. Known in every county of Missouri, his election promises marked progress for the medical profession of the entire state.

Dr. Breuer was born in Gasconade County, Missouri, on October 19, 1878, where he was educated in the public schools, being graduated from Owensville High School in 1894. Following this he taught school for one year. However, he was deeply interested in a medical career and the next few years found him attending Beaumont Hospital Medical College, from which he was graduated in 1898. A year as intern in Alexian Brothers Hospital, St. Louis, under Dr. F. J. Lutz gave much practical experience. He then located at St. James where he definitely established himself in his medical work. Becoming a member of the Missouri State Medical Association in 1900,



JABEZ NORTH JACKSON, M.D.

KANSAS CITY

President-Elect, American Medical Association 1926-1927,

he has attended every meeting since that time with the exception of two sessions which were held while he was in the army. He has been Councilor of the Twenty-Sixth District since 1909. From 1909 to 1913 and again from 1921 to the present time he has served as surgeon for the Federal Soldiers' Home at St. James. In addition to his numerous medical affiliations Dr. Breuer is a Mason and an Odd Fellow, holding the office of Grand Master of the Odd Fellows in 1923. In 1900 he was married to Miss Fannie McMahon.

REVOKES CHARTER OF KANSAS CITY MEDICAL COLLEGE

On June 23 the Missouri Supreme Court ordered the charter of the Kansas City College of Medicine and Surgery forfeited for violation of its charter provisions. Thus, one of the schools so scandalously involved in the medical diploma mill is permanently closed. The Supreme Court still has under consideration the suit to revoke the charter of the St. Louis College of Physicians and Surgeons, also closely involved in the medical diploma mill.

The reputable medical profession of Missouri, as well as the entire country, received this announcement with great satisfaction for it removes an institution which has grossly misused its powers and its privileges and brought shame and humiliation upon our state.

During the trial of certain so called graduates of the Kansas City School and the St. Louis School by the State Board of Health to revoke the licenses of certain graduates, Dr. E. P. North, then president of the board, was so impressed with the gross violations of the charter privileges by these schools that he determined to attempt their suppression. With the cooperation of Assistant Attorney General J. Henry Caruthers, who conducted the prosecution of the trials to revoke the licenses, full data of the illegal operation of these schools were gathered and ouster proceedings were filed against both schools in June, 1925.

Under the direction of the Supreme Court Mr. Edwin J. Bean, St. Louis, was appointed special commissioner to take the testimony in the hearings. These hearings were held in St. Louis and Kansas City and numerous witnesses were called to testify against the schools, including Dr. North and Dr. F. C. Waite, Cleveland, who made the survey of the medical schools in Missouri for the State Board of Health in 1923. Commissioner Bean filed his report with the Supreme Court last March and recommended that the charters of both schools be revoked. The opinion ordering the forfeiture of the Kansas City school was written by Judge J. T. White.

Judge White held that the Kansas City College, which was incorporated as a benevolent association, had been operated for private benefit thereby violating a section of the law that associations incorporated as benevolent associations shall not be operated for pecuniary gain. The opinion held that the school had "misused its corporate powers in a manner which threatens serious injury to the public welfare." Judge White stated that the evidence showed the college had issued fifty or sixty diplomas for \$200 each to persons who had never attended the school and in at least one instance the person receiving the diploma was not shown to have attended any medical school. "We can imagine no more serious injury to the public," Judge White wrote, "than the issuance of degrees to practice medicine to persons wholly unqualified to treat the sick." The evidence showed that one man bought an honorary medical degree for \$500 and that a Doctor of Divinity degree was sold to another person for \$300.

Attorneys for the college contended that the college had the right to issue honorary degrees and receive money for them, but Judge White stated that the evidence showed that these honorary degrees were issued on regular graduate certificate forms with "honorary" written in and that the certificate stated the recipient had compiled with all the requirements and passed the prescribed examinations. "This was a base falsehood," Judge White said, the evidence clearly showing that the transactions were the sale of diplomas.

The attorneys for the college attempted to have the case transferred to Jackson County Circuit Court and a trial by jury, but this the Supreme Court denied, holding that a corporation whose right to exist is being inquired into by quo warranto proceedings has no right to trial by jury.

OUT CLINICS OF STATE HOSPITALS

For a number of years several of our members have been planning a method of extending the service of the state hospitals through clinics to be held at various points by the staffs of the hospitals. The plan was endorsed by the eleemosynary board and health supervisor, Dr. George A. Johns, and was brought to practical application on May 25, when Dr. Johns conducted a clinic at his office in Jefferson City. He was assisted by Dr. M. O. Biggs, Superintendent of State Hospital No. 1, Fulton, and Dr. E. E. Bruner, Superintendent of Missouri State School (the institution for the feeble-minded at Marshall) and members of the Cole County Medical Society.

Relatives of patients in the institutions from Jefferson City and vicinity were notified of the meeting and were invited to appear and consult



WILLIAM H. BREUER, M. D.
ST. JAMES
President, Missouri State Medical Association 1926-1927

the physicians concerning the welfare of the patients. The meeting was a very pronounced success and the physicians were greatly encouraged to make this out clinic feature a regular department of their service to the people. The relatives of twenty-eight patients, ten of whom were inmates of the state penitentiary, consulted with the physicians and much information was gained which will be very helpful to the staffs in the care and treatment of the patients. The ten in the penitentiary were examined by Dr. Johns and his assistants and eight of them were found proper subjects for transfer to State Hospital No. 1.

The result of this first effort to hold periodic consultations with the relatives of the inmates of the state hospitals has encouraged the physicians in charge of the institutions to extend this service to all parts of the state. Dr. H. S. Gove, of Linn, has requested Dr. Johns to arrange for a clinic in Osage County, and Dr. Johns is anxious to hear from other sections of the state where such clinics may prove useful in extending the service of the state hospitals to the people.

The state hospitals have too long been looked upon as institutions where the insane and feeble-minded were to be permanently incarcerated. Our knowledge of mental diseases has grown with astonishing rapidity along with other developments in the growth of scientific medicine and with this increase of knowledge alienists have realized that a very large percentage of those afflicted with mental diseases can be cared for and comfortably adjusted to their environment in their own homes if it were possible for the relatives and friends to receive rational instruction in this direction.

Furthermore, enlightenment upon the methods of preventing certain forms of mild mental aberration should be conveyed to the public. Undoubtedly the staffs of the state hospitals are the proper persons to direct this movement and it was with this ultimate object in view that Dr. Johns and his staffs have inaugurated the Out Clinic service.

As this movement grows, and it should have a rapid growth, we believe many mild cases now confined in the state hospitals can be returned to their homes without danger to the community, but on the contrary with comfort to the patients and very decided mental consolation for the relatives and friends of the unfortunately afflicted persons.

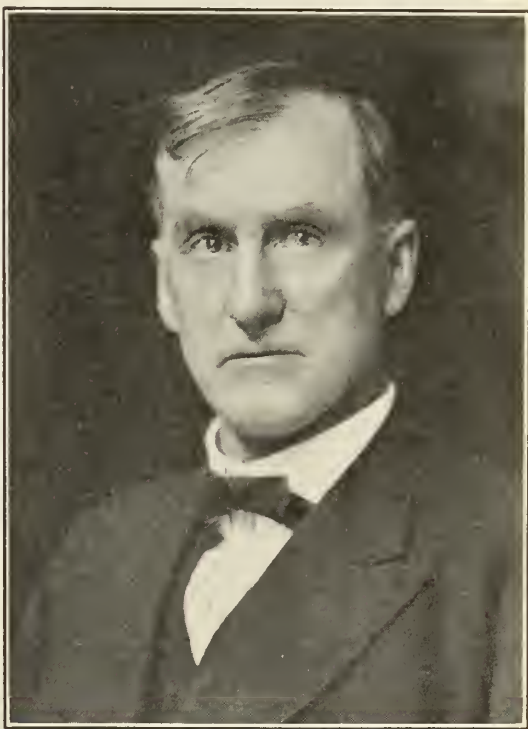
DID YOU MAIL THE DIRECTORY INFORMATION CARD?

During the month of June, every physician in the state should have received a Directory information card. We hope every one filled

out and returned the stamped card to the American Medical Association regardless as to whether he or she had changed their residence or office address.

This information will be used in compiling the Tenth Edition of the American Medical Directory, now under revision in the Biographical Department of the Association. The Directory is one of the altruistic efforts of the American Medical Association and is published in the interest of the medical profession which means ultimately in the interest of the public. It is a book of dependable data concerning the physicians and hospitals in the United States and Canada. Full paid members are listed in capital letters.

If you have not yet paid your dues in your county society it is important that this be done immediately so your name may be properly listed to indicate that you are fully paid up in the organization.



GEORGE C. WILLSON, M.D.

FIRST VICE PRESIDENT, 1925-1926

Dr. George C. Willson, Nevada, First Vice President of the Association, was born in Morgan County, March 4, 1852. After attending the public schools, he entered St. Louis Medical College, now Washington University Medical School, and was graduated in 1879. He began practicing at Papinville, Mo., but moved to Nevada in 1886 where he has become one of the

outstanding citizens of that community. He was superintendent of State Hospital No. 3 for four years and has been president of the Vernon County Medical Society, the Nevada Board of Education, and the Nevada Business Men's Club. Dr. Willson is one of the most successful physicians in Vernon County, and has always worked faithfully for the upbuilding of the county and state societies.

NEWS NOTES

Dr. H. W. McKim, La Belle, has been bereaved by the loss of his wife who died on May 7.

Dr. H. W. Lyman, St. Louis, was elected vice president of the American Laryngological, Rhinological & Otological Society at the meeting held in Montreal, June 3.

Dr. Luther M. Callaway, Kansas City, received the degree of Master of Medical Science in Otolaryngology from the University of Pennsylvania on June 16.

Mrs. J. C. Brown, wife of Dr. J. C. Brown, Lewistown, President of Lewis County Medical Society, suffered a fracture of the neck of the left femur caused by a fall several weeks ago.

Dr. Paul F. Cole, Springfield, made a short visit to his former home in Lewis County early in May and renewed old acquaintances. Dr. Cole was one time president of the Lewis County Medical Society.

Drs. Frank D. Dickson and Rex L. Diveley have removed their Clinic for Bone and Joint Surgery from the Christian Church Hospital to St. Luke's Hospital, 44th and Mill Creek Boulevard, Kansas City.

Dr. E. H. Skinner, Kansas City, was elected vice president of the American Radium Society, and Dr. E. C. Ernst, St. Louis, was elected secretary of that society at the annual meeting held in Dallas, April 19, 1926.

The next examination given by the American Board of Otolaryngology will be held in Denver, Colorado at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

The Medical Society of the Missouri Valley will hold its 39th annual meeting in Omaha and Council Bluffs jointly, September 15, 16

and 17. The preparation of the program will follow the plan adopted last year, papers being contributed by the members of the various departments of the universities of Missouri, Kansas, Iowa, and Nebraska. Clinics will also be held in the hospitals of the two cities. Dr. Earl Sage, Omaha, and Dr. M. E. O'Keefe, Council Bluffs, have charge of the arrangements for the meeting.

The second annual meeting and banquet of the Ensworth-Central Medical College Alumni will be held at Hotel President, Kansas City, Wednesday evening, Oct. 13, 1926, during the Kansas City Fall Clinics week. They now have an enrollment of fifty members and are anxious to enroll all the graduates of the Northwestern, Central and Ensworth Medical Colleges. The dues are \$1.00 per year. The professors of the three colleges are eligible to membership. An entertaining program is being arranged.

The annual meeting of the Mid-Western Association of Anesthetics will be held October 11-14, 1926, in Kansas City, Mo., at the same time as the Clinic Week there. Headquarters, Baltimore Hotel. An interesting and attractive program is in the process of making. Any physician or dentist desiring to read a paper should send the title of his paper to the secretary very soon.

RALPH M. WATERS, M.D. Sec.-Treasurer.
A25 Argyle Bldg., Kansas City, Mo.

The United States Civil Service Commission announces that open competitive examinations for applications for medical officer positions will be rated as received at Washington, D. C., until December 30. The examinations are of five grades: Junior medical officer, assistant medical officer, associate medical officer, medical officer, and senior medical officer. Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience. Blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or at the post office or customhouse in any city.

To encourage investigations of alimentary tract function, Dr. Frank Smithies, Chicago, has presented to the School of Medicine of The University of Illinois, bonds in amount sufficient to yield annually in perpetuity not less than \$100. This fund is known as "The William Beaumont Memorial Fund" and the income therefrom as "The Annual Beaumont Memorial Award." The award is to be made each year to the research or clinical investigator who, in the judgment of a faculty committee, has contributed the most important

work during the year in the field designated. The first award will be made in 1927. Manuscripts covering investigations do not have to be entered specifically for the award nor is it required that they be submitted to the faculty committee. The award is to be granted by the committee after it has considered carefully all investigations published during any year in periodicals throughout the United States. Thus, the award is available to workers in any institution and is not confined to members of either faculty or student body of The University of Illinois.

OBITUARY

EDWARD PARK HALL, M.D.

Dr. Edward Park Hall was born February 2, 1877, at St. Joseph, Missouri, and died May 17, 1926, at Kansas City. Dr. Hall received his preliminary education at the Missouri Military Academy, and was graduated from the Ensworth Medical College, St. Joseph, Missouri, in 1897. He practiced in St. Joseph until 1907, when he did post-graduate work in the New York Polyclinic College Hospital and the Manhattan Eye, Ear, Nose and Throat Hospital. He located in Kansas City in 1909, doing special work in Eye, Ear, Nose and Throat.

Dr. Hall was a member of the Jackson County Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association, the American Academy of Ophthalmology and Otolaryngology, and the American College of Surgeons. He was formerly Associate Professor of Otorhinolaryngology in the medical department of the University of Kansas.

Dr. Hall was a man of very marked likes and dislikes, who developed many staunch friends and quite a number of energetic enemies. He was essentially English in his tastes, and exhibited individuality to the point where it almost shaded off into eccentricity.

His final illness was of the protracted character, and his intimate friends saw very little of him during his last months. He was very active as a Fellow of the American College of Surgeons and was very conscientious as a teacher, and made some contributions to medical literature.

His last will, in which a provision was made for an annuity for needy medical students, is typical of the magnanimity and charity of the man. This last contribution of his to scientific progress will serve as a living memoir that will aid numerous deserving students to accomplish their ambitions. Dr. Hall will be missed.—*Bull. Jackson County Medical Society.*

HUGH D. HAMILTON, M.D.

Dr. Hugh D. Hamilton was born in Ray County, Missouri, November 7, 1872. His preliminary education was received in the public schools and in the Woodson Institute at Richmond, Mo. When he was only thirteen years old his father died and young Hugh was on this account forced to assume the responsibility of caring for his widowed mother and a younger brother and sister. In those trying days, he not only tasted of privation every day but drank of its bitter dregs.

By his industry and frugality he managed to save enough to enter upon the study of medicine and he was graduated from Missouri Medical College (now Washington University) in 1898. He immediately located in Kansas City and began to make a name for himself in the field of medicine. Some years later he went to London for graduate work in diseases of the heart and circulatory system under the tutelage of the renowned Sir James McKenzie.

As a physician, he was the peer of any of his contemporaries and those to whom he ministered will testify not only to his ability but also to his loving nature, his kindly spirit, his helpful council, and his boundless compassion.

He had long been an honored member of the Jackson County Medical Society and the Society had been pleased to honor him as a member of the council and of its board of censors. Besides the Jackson County Society and its affiliated organizations he was a member of the American Congress of Internal Medicine and a staff member of the St. Joseph Hospital, Christian Church Hospital, and the Kansas City General Hospital. He served as a captain in the World War and was honorably discharged in July, 1919.

Dr. Hamilton was a member of the Linwood Blvd. Presbyterian Church, in which he had been a ruling elder for many years and his profound belief in God and his devotion to his religion was manifest every day in his life.

In his passing not only our local Society but the entire field of organized medicine has sustained a loss. May we indulge the hope that the younger members in medicine may strive to emulate the example he has set in honesty of purpose, devotion to duty and Christian charity for all his fellow men.

To his devoted wife and to his two sons, Hugh, Jr. and Tom, the Society extends its sincere sympathy and may the burden of their sorrow be somewhat lightened by the thought that the world is better because he lived.—*Bull. Jackson County Medical Society.*

THOMAS FREEMAN McGLASSON, M.D.

Dr. Thomas Freeman McGlasson, Lewistown, a graduate of the University of Illinois

College of Medicine, 1886, died at State Hospital No. 1, Fulton, May 3, following a long illness.

For the first year after his graduation he practiced at Colusa, Illinois, then moved to Lewistown, Missouri, where he continued to practice for the rest of his medical career. Dr. McGlasson was a good country practitioner, a likeable man who stood well in his community and earned the respect and confidence of his confreres.

The funeral was held at Lewistown and largely attended by the residents of the city and other parts of the county. The services were conducted by the local Masonic Lodge at Canton, the members of the Lewis County Medical Society acting as pallbearers. He is survived by his widow and two daughters. He was a member of the Lewis County Medical Society and the Missouri State Medical Association.

J. C. BROWN, M.D.

CHARLES P. CATHCART, M.D.

Dr. Charles P. Cathcart, of Scotch-Irish parents, was born in Dallas County, Texas, October 8, 1849, and died in Kansas City, April 22, 1926.

His early life was spent in LaPorte County, Indiana, where he received his preliminary education. He graduated from the Eclectic Medical College of Cincinnati, Ohio, in 1872. He first practiced in Piqua, Ohio, and in Westville and in the winter of 1880 and 1881 he attended a course of lectures at Bellevue Medical College, New York City, receiving a diploma in physical diagnosis from Dr. Janeway, also one from Dr. Bryant in surgery.

Dr. Cathcart came to Kansas City in the spring of 1881 and was a charter member of Jackson County Medical Society. Always seeking further advancement in his profession he took post-graduate work and received a degree from the University Medical College of Kansas City in 1884.

He was elected an honor member of this society in 1912 and on "President's Night," April 7, 1925, he was a guest of honor in celebration of his semi-centennial anniversary in the practice of medicine.

As a general practitioner his success was remarkable and for many years Dr. Cathcart specialized in obstetrics. Although he had passed the age for enlistment in the World War, he went to Washington, D. C., and was assigned to duty during the "flu" epidemic. He was active in Masonic work, being a 32nd degree Mason.

The foregoing summary of the more important events of his life indicate that in the death of Dr. Cathcart, the medical profession

of Kansas City has lost an outstanding figure. To know him was to love him. His passing will be mourned especially because of the spirit of friendliness which he coupled with his conscientious work. Quiet and retiring he endeared himself to the large number of people who knew him, both in the profession and among the laity.—*Bull. Jackson County Med. Socy.*

WILLIAM DIVINE DAVIS, M.D.

Dr. William Divine Davis, St. Louis, died suddenly on Thursday evening, May 20, 1926, of heart failure, aged 38 years.

He was born August 29, 1887, in Terre Haute, Indiana, and after obtaining his preliminary education in that city came to St. Louis and entered the Medical Department of Washington University. He graduated in medicine in 1909 and served an internship at the City Hospital for two years and also at the old Female Hospital for one year. During the World War he was one of the first to volunteer, and served as Captain for two years overseas.

At the time of his death, he held the rank of Major in the Medical Reserve Corps. After his return from the war Dr. Davis devoted his entire time to specializing in dermatology. In his chosen specialty he was unusually successful, and was a member of the faculty of the St. Louis University Medical School, and a member of the staff of the Shriners Hospital and Masonic Home. He was also an active member of the St. Louis Medical Society, Missouri State Medical Association, American Medical Association, and the St. Louis Dermatological Society.

Dr. Davis was personally very popular and well liked by his many friends and medical associates. His sudden and untimely death was a great shock to them.

He is survived by his wife, Edna Kennedy Davis, and a daughter, Dorothy Virginia.

Our heartfelt sympathy is extended to the family in their bereavement.—*Bull. St. Louis Medical Society.*

ERROR OF BASING SERUM DIAGNOSIS OF SYPHILIS ON KAHN REACTION ALONE

Sigmund S. Greenbaum, Philadelphia (*Journal A. M. A.*, April 24, 1926), expresses the opinion that the serum diagnosis of syphilis is best served by using both tests as a routine. In his experience, both tests agreed as far as positive or negative were concerned in from 96 to 97 per cent. of the cases. It is frequently observed that the two reactions vary in the degree of positiveness, but it is impossible to compare them accurately on this basis, because they vary so greatly in technic and the immunologic principles involved. Nor is this a matter of much clinical importance; and it is of infinitely less importance than the question of a true and specific positive or negative reaction regardless of the degree of positiveness.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL,
FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

- Camden County Medical Society, November 23, 1925.
- Howard County Medical Society, January 8, 1926.
- Ralls County Medical Society, February 27, 1926.
- Schuyler County Medical Society, March 25, 1926.
- Franklin County Medical Society, March 29, 1926.
- Monroe County Medical Society, April 14, 1926.
- Howell-Oregon Medical Society, April 7, 1926.
- Atchison County Medical Society, April 26, 1926.
- Saline County Medical Society, May 15, 1926.

MISSOURI STATE MEDICAL ASSOCIATION
Sixty-Ninth Annual Meeting, St. Louis
May 17, 18, 19, 20, 1926

MINUTES OF THE HOUSE OF DELEGATES
Class Room St. Louis University Law School
Monday, May 17, 1926—Morning Session

The House of Delegates of the Sixty-Ninth Annual Meeting of the Missouri State Medical Association was called to order by the President, Dr. Emmett P. North, St. Louis, at 10 a. m., Monday, May 17, 1926, in the Class Room of the St. Louis University Law School, St. Louis.

At roll call eighty-six delegates responded as follows:

Officers

- PresidentEmmett P. North, St. Louis
- Vice President...A. R. Rowe, Poplar Bluff
- Secretary-Editor..E. J. Goodwin, St. Louis
- TreasurerG. W. Hawkins, Salisbury

Councilors

- 2nd DistrictH. S. Conrad, St Joseph
- 4th DistrictGeo. M. Bristow, Princeton
- 6th DistrictJ. S. Gashwiler, Novinger
- 9th DistrictA. R. McComas, Sturgeon
- 11th DistrictJ. H. Timberman, Chillicothe
- 14th DistrictC. T. Ryland, Lexington
- 16th DistrictT. B. M. Craig, Nevada
- 17th DistrictGuy Titsworth, Sedalia
- 18th DistrictW. L. Allee, Eldon
- 19th DistrictW. A. Clark, Jefferson City
- 20th DistrictR. S. Vitt, St. Louis
- 22nd DistrictG. S. Cannon, Fomfelt
- 26th DistrictW. H. Breuer, St. James

Delegates

COUNTY

DELEGATES

- AtchisonE. P. Taylor, Fairfax
- BatesC. J. Allen, Rich Hill
- BooneF. G. Nifong, Columbia
- BuchananH. W. Carle, St. Joseph

- BuchananJ. F. Owens, St. Joseph
- CaldwellB. F. Carr, Polo
- Cape Girardeau ...E. H. G. Wilson, Cape Girardeau
- CarrollR. F. Cook, Carrollton
- Carter-Shannon ..A. Johnston, Grandin
- CassT. W. Adair, Archie
- ChristianH. J. Wise, Sparta
- ClayJ. E. Baird, Excelsior Springs
- DaviessN. M. Wetzell, Jameson
- DunklinE. L. Spence, Kennett
- FranklinJ. P. Dunigan, Sullivan
- GreeneJos. W. Love, Springfield
- GreeneP. F. Cole, Springfield
- HenryR. D. Haire, Clinton
- Howell-Oregon ...H. A. Thompson, Lanton
- JacksonG. Wilse Robinson, Kansas City
- JacksonH. M. Gilkey, Kansas City
- JacksonJ. R. McVay, Kansas City
- JacksonR. W. Holbrook, Kansas City
- JacksonE. F. DeVilbiss, Kansas City
- JacksonF. I. Ridge, Kansas City
- JacksonF. C. Rumsey, Kansas City
- JacksonM. H. Clark, Kansas City
- JacksonE. L. Stewart, Kansas City
- JacksonM. J. Owens, Kansas City
- JasperL. C. Chenoweth, Joplin
- JeffersonN. W. Jarvis, Festus
- JohnsonH. F. Parker, Warrensburg
- LacledeJ. A. McComb, Lebanon
- Lawrence-Stone ..H. L. Kerr, Crane
- MadisonE. E. Higdon, Fredericktown
- MillerG. D. Walker, Eldon
- MississippiA. H. Marshall, Charleston
- New MadridW. N. O'Bannon, New Madrid
- NodawayH. S. Dowell, Maryville
- PettisA. J. Campbell, Sedalia
- PhelpsS. L. Baysinger, Rolla
- PlatteS. L. Durham, Dearborn
- PulaskiC. Mallette, Crocker
- RallsJ. E. Brown, Perry
- RandolphG. O. Cuppaidge, Moberly
- St. CharlesErich Schulz, St. Charles
- St. LouisJ. H. Armstrong, Kirkwood
- St. Louis City ...Fred Bailey, St. Louis
- St. Louis City ...W. W. Graves, St. Louis
- St. Louis City ...C. E. Burford, St. Louis
- St. Louis City ...W. H. Vogt, St. Louis
- St. Louis City ...A. H. Hamel, St. Louis
- St. Louis City ...J. C. Morfit, St. Louis
- St. Louis City ...T. C. Hempelmann, St. Louis
- St. Louis City ...Wm. Kerwin, St. Louis
- St. Louis City ...H. Untenberg, St. Louis
- St. Louis City ...John Green, St. Louis
- St. Louis City ...Amand Ravold, St. Louis
- St. Louis City ...S. T. Bassett, St. Louis
- St. Louis City ...W. D. Black, St. Louis
- St. Louis City ...H. M. Moore, St. Louis
- St. Louis City ...C. H. Shutt, St. Louis
- St. Louis City ...V. B. Kieffer, St. Louis
- St. Louis City ...Stanley S. Burns, St. Louis
- ScottU. P. Haw, Benton
- StoddardFrank LaRue, Dexter
- TexasLeslie Randall, Licking
- Vernon-Cedar ...G. C. Willson, Nevada
- Wright-Douglas ..E. C. Wittwer, Mountain Grove

On motion by Dr. G. W. Hawkins, Salisbury, duly seconded, the reading of the minutes of the last Annual Meeting was dispensed with and adopted as published in THE JOURNAL. Carried.

The President, Dr. E. P. North, of St. Louis, read his message and recommendations as follows:

President's Message and Recommendations

To the Members of the House of Delegates:
The past year has been one of extreme importance to

our organization. Being an off year as far as legislative duties are concerned, your officers thought best to aid the incoming administration by laying plans in advance to strengthen their hands. We have held councilor district meetings at Rolla, Warrensburg, Moberly, Springfield, West Plains, Columbia, Poplar Bluff, Nevada, Chillicothe and Excelsior Springs, thus covering almost every section of the state with the exception of the northeast sector, which meeting was called off on account of bad roads. To the members who accompanied us on these trips we are very grateful.

The Secretary's office has functioned one hundred per cent. Dr. Goodwin not only arranged the itinerary, furnished the program with the aid of the local societies, but attended every meeting. His duties have been laborious and with his long experience and acquaintanceship in organization work, he has been of great assistance to me.

Public opinion is thoroughly aroused over the expose of the medical diploma mills so that we should have no trouble in convincing the Missouri legislature of the needs of a medical practice act with teeth which will protect the health of its citizens. The present medical practice act was passed before the organized effort on the part of the cults and low grade medical schools to invade the field of medicine illegally. Under the leadership of Lutz, McAlester, the Halls and others, the practice of medicine for the first time in the state of Missouri was given recognition in statutory form. The trials and tribulations of these men stand out in the lead. Their memory should be forever revered by future generations of doctors in this state. We should proceed to the drafting of a model medical practice act so as to present it in due time.

The enforcement of the Volstead Act is one in which every reputable physician should be interested. I have conferred with Senator Alroy S. Phillips, recently appointed Prohibition Administrator of Missouri, and have taken the liberty of inviting him to address you and I recommend that he be given the privilege of the floor. Mr. Phillips is also interested in upholding the workmen's Compensation Act which has been rendered inoperative by a referendum that will be voted upon in the forthcoming election this fall. He has something of interest to tell you as to how this law will affect the physicians of the state.

The American Medical Association has submitted a model constitution and by-laws for constituent state associations as prepared by a special committee of the House of Delegates of that body. This has been referred to all state and territorial medical associations for consideration in order to establish a uniform constitution and by-laws. I recommend that this copy, which is on the Secretary's desk, be referred to our Committee on Revision of Constitution and By-Laws for consideration and that it be published in THE JOURNAL in the March issue of 1927 before our next Annual Meeting together with a report of this committee.

The principal points of difference are that the new constitution provides, first, for a president-elect who shall be an ex-office member of the Council; second, only one vice president; it also provides for auditing the finances and a budget system. The auditing has been done each year by a special committee of the Council.

I earnestly recommend that we have the books audited each year and that a budget be drawn up by the Council and referred to the House of Delegates for approval each year.

The component societies of Kansas City and St. Louis have given very great attention to scientific work and they have excellent organizations. The Kansas City physicians seem to be more adept in advertising the accomplishments of the medical profession in that community than any other organization.

It seems to me that these two bodies would function with even greater efficiency if they had for a president a member devoting himself to scientific development of the society, and the business body headed by another member who could direct the business affairs of the society unhampered by the scientific work.

The movement to encourage periodic health examinations among the laymen is one that deserves your attention. This should have the sympathetic consideration of the county societies, with the family physician as the one who should make the examinations. The American Medical Association has issued a pamphlet which they sell at cost and they have urged us to purchase enough copies to place one copy in the hands of every member of our Association.

The extension of post graduate instruction to members in the rural districts should be inaugurated, as that is one of the objects we had in view when the dues were raised last year. This subject could well be worked out by the Council and speakers assigned to such districts as will arrange for a meeting with a satisfactory attendance. The expenses of these speakers should be borne in part if not wholly by the Association.

It is a great pleasure to inform you of the great achievement accomplished by your delegates at the Dallas meeting of the American Medical Association when Dr. Jabez N. Jackson, Kansas City, was elected president-elect of the national organization. Missouri has been honored with this distinction on several previous occasions, but it has been almost forty years since our Association has furnished a president of the American Medical Association.

Respectfully submitted,
E. P. NORTH, President.

Dr. A. H. Hamel, St. Louis, moved that the President's message be referred to the Council. Seconded and carried.

There was no report from the Committee on Arrangements.

The Secretary, Dr. E. J. Godwin, St. Louis, read his report. (See page 276.)

Dr. A. H. Hamel, St. Louis, moved that the Secretary's report referred to the Council. Seconded and carried.

The Treasurer, Dr. G. W. Hawkins, Salisbury, read his report. (See page 275.)

On motion by Dr. H. L. Kerr, Crane, duly seconded, the Treasurer's report was referred to the Council.

Dr. C. E. Hyndman, St. Louis, Chairman of the Defense Committee not being present, the Secretary announced that he had the defense committee's report and the president directed him to read the report. (See page 276.)

The report was discussed by Dr. L. C. Chenoweth, Joplin, and Dr. W. H. Breuer, St. James.

Dr. A. H. Hamel, St. Louis, moved that the report be referred to the Council. Seconded and carried.

The President, Dr. E. P. North, St. Louis, announced that Senator Alroy S. Phillips, Prohibition Administrator for this district, was present and desired to address the House.

On motion, Senator Phillips was given the privilege of the floor.

During the address by Senator Phillips, a motion was made and carried that the House go into executive session.

Senator Phillips continued his remarks.

Dr. A. H. Hamel, St. Louis, said that the discussion by Senator Phillips was most interesting, but since the time was short before the hour for adjournment, he moved that Senator Phillips be invited to continue his discussion this afternoon. Seconded and carried.

Dr. E. L. Stewart, Kansas City, moved that the remarks by Senator Phillips be approved and published in THE JOURNAL. Seconded. Discussion by Dr. A. H. Hamel, St. Louis. On vote, the motion was lost.

Dr. M. P. Overholser, Harrisonville, Chairman of the Committee on Revision of the Constitution and By-Laws, asked for further time in which to make his report. He also requested that his committee meet at the Melbourne Hotel.

The President announced that the committee would be given further time to complete its report.

Dr. J. C. Morfit, St. Louis, moved that the order of business be interrupted and that we take up the order of Resolutions, Memorials, etc. The motion was seconded. Discussion by Dr. W. H. Breuer, St. James, and Dr. G. S. Cannon, Fornfelt.

The question was put and Dr. A. R. McComas, Sturgeon, voted no.

After discussion about unanimous consent being necessary to change the order of business, the Chair ruled that unanimous consent was not necessary. Dr. McComas withdrew his negative vote, after which Dr. Morfit renewed his motion. Seconded and carried.

Under the order of Resolutions, Memorials, etc., Dr. J. C. Morfit, St. Louis, moved that the model constitution and by-laws submitted by the American Medical Association be received and referred to the Committee on Constitution and By-Laws. Seconded and carried.

Dr. Amand Ravold, St. Louis, introduced amendments to the constitution and by-laws and a resolution as follows:

Amendments to the Constitution and By-Laws

Amend Sec. 2, Article VIII, by adding, "The President, Vice Presidents, and Councilors shall not be eligible to succeed themselves," so that said section shall, when amended, read:

Sec. 2. The President and Vice President shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its Annual Meeting and each shall hold his office for one year. The Councilors shall be elected for terms of three years each, being so divided that one-third of the number shall be elected each year. All these officers shall serve until their successors are elected and installed. The President, Vice President, and Councilors shall not be eligible to succeed themselves.

Amend Sec. 3, Article VIII, by omitting the words "and Councilors" and "But no delegates shall be eligible to any office named in the preceding section except that of Councilor" and by adding the words "Councilors shall be elected by a majority of the delegates present from the respective councilor districts and if there be only one member of the Association present from any councilor district he shall be elected Councilor by the House of Delegates to fill the vacancy," so that said section shall, when amended, read:

Sec. 3. The President and Vice President shall be elected by the House of Delegates, and no person shall be elected to any office who is not in attendance at that Annual Session and who has not been a member of the Association for the previous two years. Councilors shall be elected by a majority of the delegates present from the respective councilor districts and if there be only one member of the Association present from any councilor district he shall be elected Councilor by the House of Delegates to fill the vacancy.

Amend Sec. 1, Chapter IX, of the by-laws by substituting the word and number "eight" by the word and number "five" and by adding the words "assessments or dues shall not be increased except after the proposal for such increase has been presented to each member and to each county society by letter and publication in THE JOURNAL with a copy of the last annual or special report of the auditors and copy of the budget, and a statement of the reason for the proposed increase. The affairs of the Association shall be audited annually or oftener by a certified public accountant of the highest standing and a budget system shall be adopted and presented to the members through THE JOURNAL at least sixty days before the annual meeting," so that said section when amended shall read:

Chapter IX, Sec. 1. An assessment of five dollars (\$5.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription to THE JOURNAL for one year. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Association on or before December 31, in advance of each Annual Session. Assessments or dues shall not be increased except after the proposal for such increase has been presented to each member and to each county society by letter and publication in THE JOURNAL with a copy of the last annual or special report of the auditors and copy of the budget and a statement of the reason for the proposed increase. The affairs of the Association shall be audited annually or oftener by a certified public accountant of the highest standing and a budget system shall be adopted and presented to the members through THE JOURNAL at least sixty days before the annual meeting.

Resolution

Resolved, That the Council is hereby authorized and directed to immediately employ Price, Waterhouse and Company to audit the affairs of the Missouri State Medical Association.

Resolved, That the House of Delegates shall elect a committee of three members to revise the constitution and by-laws, said committee to make its report through THE JOURNAL and to each county society at least ninety days before the next Annual Meeting. Such report to be made a special order of business at the next Annual Meeting of the Association, said report and publicity to be considered as having the same effect and force as if it had been introduced at the previous Annual Meeting.

After discussion, the Chair ruled that these amendments would be referred to the Committee on Constitution and By-Laws.

The President appointed the following Committee on Nominations:

Drs. J. R. McVay, Kansas City; A. J. Campbell, Sedalia; G. D. Walker, Eldon; H. M. Moore, St. Louis; H. L. Kerr, Crane; G. M. Bristow, Princeton; Leslie Randall, Licking; T. W. Cotton, Van Buren; J. F. Owens, St. Joseph; J. H. Timberman, Chillicothe.

On motion, adjourned.

Afternoon Session

The House of Delegates was called to order by the President, Dr. E. P. North, St. Louis, at 3 p. m. Monday, May 17.

The report of the Council was read by Dr. A. R. McComas, Surgeon, Chairman of the Council, as follows:

REPORT OF THE COUNCIL

The Executive Committee held one meeting during the year. Many matters coming up were attended to by correspondence. One member of the Council, Dr. J. P. Burke, California, Councilor of the 18th District, who had served long and faithfully, died on August 31, 1925, and Dr. W. L. Allee, Eldon, was appointed to fill the term ad interim.

An attempt was made to organize Ozark County Medical Society by Dr. J. C. B. Davis, Willow Springs, Councilor of the 28th District, in June 1925. On account of the small number of physicians in the county the doctors decided that it was impractical to maintain a separate organization. They were invited to join organized societies in adjoining counties.

Dr. W. H. Vogt, St. Louis, Councilor of the 20th District, resigned and Dr. R. S. Vitt, St. Louis, was appointed to serve in his stead until this Annual Meeting.

The work of the secretary's office grows more voluminous every year, especially this year on account of the large number of councilor district meetings attended by the President and the Secretary. These meetings were well attended and were productive of great good. It would seem wise to continue such meetings.

With the increase in funds in the treasury, post-graduate meetings could be held in the various districts, the expenses of the speakers attending such meetings to be paid in whole or in part by the State Association if in the judgment of the House of Delegates this plan is feasible. The states of Wisconsin, Michigan, and other states are doing this service with great satisfaction to the smaller communities. A speaker of eminence from outside of the state could be invited to the larger societies on the same terms.

When the details of this plan, if it is adopted, are worked out notice of the various meetings, the time of holding them, the names of speakers and their subjects should be published, and every member of the State Association should feel privileged to attend. In this way, all members would be brought into closer contact and harmony with each other.

The Journal

THE JOURNAL is still being printed under the contract made in 1925 with the Fulton Gazette Publishing Company, Fulton, Missouri. During the past year, THE JOURNAL has contained 116 more pages than ever before. The advertising income has materially increased over previous years. Our JOURNAL compares favorably with any of the state association journals in the subject matter, variety of topics discussed, and for actual value of its contents. The editing, typography and its general make-up is above the average of like publications.

Finances

Our financial condition is better than at any time since our ill-fated foray in the referendum field and the consequent legal battle on the Medical College Bill with which you are familiar. We now have in the treasury in all funds over \$17,000 to carry us through the year, which is more than twice as much as we had last year, but that fact should not lead us into the error of spending this money unwisely.

In the model constitution and by-laws prepared by a special committee of the House of Delegates of the American Medical Association, among many other wise provisions, a budget system and auditing of the finances of the Association are provided for. With the increase in our finances, the Council recommends that we adopt the budget system at this meeting. Our by-laws now provide for the auditing of the accounts of the Association by a committee of the Council.

The Council recommends that one thousand dollars be transferred to the Defense Fund.

The Council recommends that the House of Delegates instruct the Secretary to communicate with the county societies urging them to assist in the examination of school children where no agency for this purpose exists.

Fifteen councilors were present at this meeting and reports show that the county societies are in very good condition.

Respectfully submitted,

A. R. McCOMAS,
Chairman of the Council.

Dr. J. S. Gashwiler, Novinger, moved that the report be adopted. Seconded and carried.

Dr. M. P. Overholser, Harrisonville, Chairman of the Committee on Revision of the Constitution and By-Laws, asked that two members be appointed to substitute for Dr. C. J. Hunt, Kansas City, and Dr. J. E. Thornton, Columbia, who were not present.

Dr. W. H. Breuer, St. James, moved that the Chair appoint two members to act upon the Committee on Revision of the Constitution and By-Laws in the place of two absent members of the committee. Seconded and carried.

The Chair announced that he would appoint these members before adjournment.

Dr. G. S. Cannon, Fornfelt, moved that Dr. U. P. Haw, Benton, be invited to read a paper on county health unit work which Dr. Cannon thought was important for members of the House to hear. Seconded and carried.

Dr. Haw read the paper entitled "The Unsent Letter."

Dr. G. S. Cannon, Fornfelt, introduced the following resolutions:

Resolution in Regard to County Health Units

WHEREAS, The free clinics held in the various counties under the auspices of the County Health Units, are being abused by people who are able to pay for treatment received, and

WHEREAS, The regular physicians in such counties believe that such abuse is unfair and unjust to them as well as to the entire tax paying citizenship, therefore, be it

Resolved, That this Association does not approve of such abuse, and, be it further

Resolved, That we endorse any plan that will do away with such abuse, and, we recommend that any one applying for treatment at these clinics must have a statement signed by two reputable citizens of their community that the person applying for such treatment is not able to pay for treatment, and, we further recommend that the county health officer and county nurse answer only calls that are endorsed by the physicians from the community wherein they originated where possible to obtain such endorsement; but where such endorsement cannot be obtained, the health officer and county nurse may use their own judgement about answering calls.

Dr. G. S. Cannon, Fornfelt, moved the adoption of the resolution. Seconded. Discussion by Drs. L. C. Chenoweth, Joplin; U. P. Haw, Benton; A. H. Marshall, Charleston; M. P. Overholser, Harrisonville; J. C. B. Davis, Willow Springs; G. S. Cannon, Fornfelt; G. W. Hawkins, Salisbury.

Dr. E. Schulz, St. Charles, offered as a substitute motion that the report and resolution be referred to the Committee on Health and Public Instruction. Seconded. Motion lost.

The vote on the original motion was then taken and carried.

The Vice President, Dr. A. R. Rowe, Poplar Bluff, took the Chair.

Dr. E. Schulz, St. Charles, introduced the following resolution:

Resolution on Commending Dr. North

Resolved, That the House of Delegates of the Missouri State Medical Association in session at St. Louis, May 17, 1926, commend most heartily the stand taken by our President, Dr. E. P. North, St. Louis, in his efforts to raise the standard of medical education and practice and to bring to light methods that were calculated to undermine the integrity and high standing of the medical profession; be it further

Resolved, That a vote of thanks be tendered him.

The motion was duly seconded and the resolution was adopted by unanimous vote.

The President, Dr. E. P. North, St. Louis, resumed the Chair.

DR. A. H. HAMEL, St. Louis: I just wondered whether the Committee on Health and Public Instruction had anything to submit. It seems to me there is no subject so important as that. If the Committee has anything to report it seems to me this is the proper place to submit it. If not, I believe we ought to have an informal discussion and bring out some facts that might be beneficial during the coming year.

DR. L. C. CHENOWETH, Joplin: Dr. Pearse is chairman of that committee. Dr. Pearse is not here. Dr. Vitt is a member of that committee, Dr. Elam is a member of that committee, and I am a member of that committee. In the absence of any word from the chairman I want to say that I personally have no report to make. I think the suggestion of Dr. Hamel is a very good one. I think it is a subject that ought to be discussed.

DR. W. T. ELAM, St. Joseph: I have nothing to add to what Dr. Chenoweth said. I was in hopes that Dr. Pearse would be here today and we could have

a meeting and I am hopeful he will be here tomorrow, but I see no objection to Dr. Hamel's suggestion that we take up some of the phases of public health and education. Anything he might take up or originate in this body can, of course, be dealt with by the committee if there is a majority of the committee present. We could function if we had something definite to act upon. We have nothing definite to act upon as far as I know or to recommend at this time.

Dr. A. H. Hamel, St. Louis, talked upon legislative and public health matters.

Discussion by Drs. F. I. Ridge, Kansas City; J. E. Baird, Excelsior Springs; G. S. Cannon, Fornfelt; L. C. Chenoweth, Joplin; A. R. McComas, Sturgeon; M. P. Overholser, Harrisonville; G. M. Bristol, Princeton; W. T. Elam, St. Joseph; Joseph W. Love, Springfield.

Dr. McComas informed the House that a committee had been appointed last year to cooperate with the Missouri Association for Criminal Justice and requested the privilege of the floor for Dr. M. A. Bliss, St. Louis, to present the report of that committee.

Report of Committee to Cooperate With the Missouri Association for Criminal Justice

DR. M. A. BLISS, St. Louis: It doesn't seem feasible, and I don't believe it would interest the House, to read this report, so I think it is best to make a short report for the committee that Dr. McComas has mentioned.

The committee was appointed by the Executive Committee of the State Medical Association to prepare a report to the Missouri Association for Criminal Justice, but when the report had been prepared and submitted to the editor of the entire ten or twelve reports which the Missouri Association of Criminal Justice is putting out, and after a conference with the Missouri Association for Criminal Justice, they adopted it as their own report and adopted also our recommendations, and proposed to put the force of the Missouri Association for Criminal Justice behind the recommendations made in our report.

The report consists of forty-one pages and has a considerable number of tables showing the presence in the penal institutions, the one at Jefferson City and various ones at St. Louis, the colony at Boonville and the school at Tipton, showing the mental status of the numbers of citizens who are confined there. It is very easy to see, if we give it attention, that the mental status of individuals in these institutions has much to do with their behavior, and it determines their success or failure in the community very largely. What those of us who have prepared this report feel about this matter as far as criminal justice is concerned is that it has not been recognized that there are many individuals in the community who cannot by any of the ordinary tests, be determined to be insane under the definition that that word is used in the law and yet these individuals from their childhood to extreme old age never are able to live in the community without offense to it.

What we want recognized is that they are psychopathic individuals, if you want to call them that. They are departures from the normal who are incapable of living in the community and behaving themselves. Those individuals we want recognized as not normal and we don't want to be compelled to say on the stand that they are either sane or insane. That doesn't have anything to do with it. There are individuals that we know from childhood in the studies that we have made in the psychiatric clinics in St. Louis, we have been able to identify, individuals that we can say now, although they are only twelve or thirteen years old, will always be problems in the community, and we feel that some necessary provision should be made for that class. We find them in the workhouse in St. Louis and in the jail. We find them at Bellefontaine Farm, at Jefferson City, at Tipton,—everywhere we go.

It is easy to see, too, that the question of feeble-mindedness plays a large part in the matter of population. I just saw in the *Globe-Democrat* this morning an editorial giving an analysis of the educative requirements of those in the penitentiary. Now, it is true that opportunity has much to do with the amount of education that an individual requires, but we must learn to recognize the fact that individuals are graded all the way up and all the way down and that there are gifted grades of minds, second grade, sixth grade, eighth grade minds, college minds, and that these variations must be recognized. You can't make a college mind out of a third grade mind or a sixth grade mind.

We feel that as far as the medical recommendations are concerned, that there should be a state department for mental diseases with the present state hospital organization as a frame-work; that the services of this department for mental diseases should be made available to the criminal court. This department should have opportunity to study cases in the hospitals—those cases condemned by the court. The conclusions reached by the department should be submitted

in writing to the court and made available for the prosecuting and defense attorneys.

The state department for mental diseases should consist of the staffs of the state hospitals and make examinations of inmates of penitentiaries and correction schools at such intervals that such service may be required, but not less often than once a year. This should be done as an aid to the courts.

There should be a new hospital for the criminal insane and defectives at the prison planned and equipped to meet the necessary requirements.

There should be a statewide survey by the department for mental diseases, including children of the public schools.

The plea of insanity should be required to be set up in written pleadings before the trial and in such event the court should be given the power to direct and it should be the duty of the department of mental diseases to make investigation.

The thing which has stood out foremost in the minds of lawyers, physicians and all kinds of people who are social minded is the disgrace to which the medical profession has brought itself in insanity trials, and in trials chiefly for murder in which the plea of insanity is given. Now the medical profession must make its contribution towards the solution of that problem. This Committee feels that the solution of the problem is that the examiners should be state officers. At any rate there should be a report from the regularly employed physicians of the state after making an examination of the defendant, and this report sent to the court, to the attorney for the defense and to the attorney for the prosecution.

It is hardly possible that we can prevent the introduction of private examinations of privately employed experts, but we feel that it will guard against abuse if there is a report of a regularly constituted medical tribunal consisting of officers of the state, and we feel those officers of the state should be state hospital officers.

Mr. Chairman, I think I have taken up enough of the time of this House of Delegates and I thank you very much.

The President announced that the next order of business was the selection of the next place of meeting.

Dr. A. J. Campbell, Sedalia, invited the Association to hold the 1927 session in Sedalia.

Dr. H. L. Kerr, Crane, moved that the invitation from Sedalia be accepted and the Association hold the 1927 session in Sedalia. The motion was duly seconded by several members and the invitation from Sedalia was unanimously accepted.

The Chair announced the appointment of Dr. Frank I. Ridge, Kansas City, to take the place of Dr. C. J. Hunt, Kansas City, and Dr. Frank G. Nifong, Columbia, to take the place of Dr. J. E. Thornton, Columbia, to act on the Committee on Revision of the Constitution and By-Laws.

On motion, adjourned.

Wednesday, May 19, 1926—Morning Session

The third meeting of the House of Delegates was called to order by the President, Dr. E. P. North, St. Louis, at 10 a. m. Wednesday, May 19, 1926, in the class room of the St. Louis University Law School.

The Secretary called the roll and seventy-seven members answered present.

The minutes of the session held Monday, May 17, were read by the secretary and there being no corrections, the President ordered that they would stand approved as read.

Presentation of Dr. Jabez N. Jackson President-Elect of the American Medical Association

The President announced that Dr. Jabez N. Jackson, Kansas City, President-Elect of the American Medical Association, was present and declared a recess in order to hear from Dr. Jackson.

Dr. Jackson spoke as follows:

Mr. President, and—I am not going to say members of the House of Delegates—I am going to say "boys," because I hope you understand that because I have been elevated to the presidency of the American Medical Association it doesn't make me any different than one of the boys, and hope always to be just the same old kid and one of them as I always have been.

I don't want to make a speech. I simply want to say I hold my election to the presidency of the American Medical Association to not, as I deem it, strength or distinction on my

part, but largely to the loyalty of you fellows in this House of Delegates, and my friends in Missouri who stood by me for a number of years insisting that the Southwest was entitled to some recognition and making me their choice. And the loyalty of my friends has been amazing.

In this connection, one of my likewise very thorough friends from Ohio,—some one was talking to him and said, "Who is that woman?"

He said, "That is my wife."

"Couldn't you find any other woman to bring with you down to this meeting?"

He said, "No, sir, she is my wife and I am satisfied with her."

"Then we are satisfied with Jackson," my friend said.

I think the manner in which I was elected is a tribute to the profession from my state, and I am simply honored by being your representative and I want to say to you I bring back to you my appreciation.

I only want to make just one or two remarks at this time. Since my election I have had the privilege of attending several other state medical societies meetings. I visited the Jubilee meeting of the Illinois State Medical Society, the week before that, the Kansas State Medical Association meeting, and just came here today. I am impressed with the fact that the medical profession of this country faces some conditions which are not theories, that we have to recognize and keep well in mind. There is a very strong tendency among the states of the land to socialize medicine and make it a department of the state medicine, a condition which would be disastrous to medicine as a profession. And I believe, therefore, the time never has existed where it as much behooves the medical profession to be on the alert to protect their own interests as now, and in saying that it means the profession in each county in the state of Missouri, and every state of the Union or county of each state should be on their toes to watch what is taking place. We have had so much said to us about the duties that we as medical men owe the public. Medical men have never had to be told their duties to the public, because they have always sought the opportunity to render service. The medical profession has often times been called by outsiders, especially by different types of charlatans, a medical trust. That is true, it certainly is a trust, but as I understand it it is different from any other trust on earth. Every other trust has been organized to protect itself, for purely selfish reasons. It is one of the well known characteristics of the medical profession that their trust is for the benefit of everybody, instead of themselves.

It makes me mad when some people, and some doctors, get up and talk about what we owe the public. We don't owe the public a thing. The balance is all on the other side. I think the time has got to come when we should express ourselves, and in no uncertain language. Now, we are talking about this periodical health examination. I am in favor of it, but not in the hands of any sort of corporation. I believe that any doctor who is graduated from a reputable medical school has enough education to examine his own patient, and I should like to see those examinations made, but they should be done by the family physician. (Applause.)

And we have got to watch out for our interests. If we don't watch for our own interests there are plenty of other people trying to palm off all sorts of things on us. I listened to an address by a professor from the Carnegie Institute at Kansas City a year ago, and he went to work to show what it cost to educate a medical man today. The result was that he left an impression with the people he was addressing that we were under an obligation to the public. Does he stop to think that there isn't any free service done by medical men? How long would your city hospital last here in the city of St. Louis if they had to pay salaries to the medical profession to do the work there? You don't find lawyers donating their services to the poor, or any other profession. You pay your city councilors. You don't find plumbers doing any work for charity. You don't find grocers helping the needy by giving them food, sending groceries to the poor and unfortunate. But on the other hand, the most valuable men, with the most valuable talent have offered their services to the profession and people gratuitously, glad to be able to do a great service for humanity, asking and getting nothing for it. But we want, on the other hand to know that there is some recognition of the fact, and I am tired, therefore, hearing our members talking about what the medical profession owes the public, and I am particular to correct them. Everywhere I get a chance my aim is to teach them the obligation that the public owes to the medical profession. (Applause.)

As we go down the line of history we can just point out a few of the discoveries and what they have meant not simply as a health measure but to all kinds of achievements. If we were to consider for instance what sanitary science has done as represented by medical knowledge in the building of the Panama canal. It wasn't superior American engineering. It was superior American sanitation, that has meant so much to the economical business world, and how much appreciation has there been on the part of the business men? When we stop to consider the doctors who risked their own lives, the peril of yellow fever, who went in and wiped yellow fever off the face of the world, and then talk about what we owe the world! The question is, "What do they owe us?"

Now, as I say, we have got to be on the lookout all the time to protect ourselves against these different derogatory influences, and unless the medical profession is well organized and on the qui vive constantly we are going to find ourselves put in the position of a salaried class of individuals.

I read a little discussion in THE JOURNAL of the American Medical Association last week where the dean of the University of Minnesota said he didn't object to socialism, he was working on a salary and satisfied. Are you going to be satisfied to be a bunch of salaried grafters? Are you going to be satisfied to put yourselves on the same economic footing? Whenever you rob medicine of its individualism you rob it of all there is in it. We rob the profession of its opportunity for the man to accomplish something worth while for himself and you rob it of the respect the world has in the past justly given for its great accomplishments. To be properly recognized the profession must possess those same qualities in the future that it has in the past, the individual opportunity and the separate distinction from salary classes.

Now that is just a little thought and I wonder if many of you men are not thinking the same thing. I know we ought to have a greater stimulation in the next few years for the benefit of our own personal profession if nothing else, because we never have seen so many of these isms. Now there are a good many of these things that are nice idealisms, but if you lay at the bottom of them you are going to stay at the bottom. I believe that is just about all I want to say in particular right now. (Applause.)

Will you pardon me if I say one more word? I can say it now, but not in the past, because I was speaking for my own personal ambitions. My own ambitions now are satisfied, but the state of Missouri still remains one of the big states in the Union. I am going to suggest one thing to you for your consideration, after considerable experience. If in the politics of the American Medical Association, Missouri expects to acquire the things and occupy its position of prominence and influence in the American Medical Association, there is one thing you have got to look after. Pick out the best men in the profession, and when you pick the right men for your officers, keep them there. A new congressman from a district in Washington is about as useless as a snowflake in Hades. If we are going to pick men without influence and without power and then change every year, we are not going to hold our position. I am proud of Missouri. I didn't desire this honor particularly for myself, because I know you have to pay for these things, and I am going to pay for it in the next two years. But on the other hand, I have never been much of an individualist. I was born in Missouri within forty-five miles of St. Louis and I was educated here. Everything that Missouri can take from me I took from my own state, and I have got that state pride, and I want to see Missouri occupy just as high a position as it is possible for it to do. And the way you can do it is by picking good men, sending them there, and keeping them there until their acquaintance makes them influential. (Applause.)

President North: The next order of business is the election of the president.

DR. FRANK G. NIFONG, Columbia: Mr. Chairman, Gentlemen, and Fellows of the Missouri State Medical Association: I have the pleasure of presenting to you the name of a member of this organization for the honor, for it is an honor, of president of this organization for the ensuing year. This privilege is a great one and the man likewise is great, and the sense of responsibility in making this nomination is likewise great, because it isn't that we wish to confer the honor on the man because of the friendship of the individual that we are making a nomination, but because we must single out one who has fitness for this job, this most important function.

As you know and as has been indicated to you in the excellent speech you have just heard preceding me, the evolution of medicine, the changes that are taking place, almost revolutionary I might say, demand a leadership that is unusual and most skillful, and most sane and most stable, and we have to pick out a man possessing those qualifications, in order to maintain our position in the medical world and to increase our service to the public.

The day of empiric medicine is past, when knowledge was passed to our student physicians and dispensed to the community through them only, and we were a secret society, practically, but now it is our business and our duty to serve the people through educational methods more than any other way.

I have a man in mind, and if I mention his name now I needn't say another word, because this name embodies all that might be said about the fitness of an individual for this position. He comes of a distinguished family, people of the soil, men who served the state in the community with distinction and great energy and real service. He was educated in the basic and fundamental academic work and medical science. He has vision and he is a composite really of the old and new, the good old traditions in medicine coming down to amalgamate with the new, better service we must render from now on, we must choose a man who is capable of carrying on this work. He will be capable of leading us in the right direction because he has always stood for the best in the profession, is stable and has a conscience that is completely reliable. For instance, take the matter of service to our rural communities in medicine. He is a rural man, we wish to have a president this year from the rural community. There isn't anything more pressing than the problem of how we have served the people of the small community, the cross roads and smaller town. The old-fashioned, the old country doctor, is passing away, and now

new conditions are to be met, and we have to meet them by some sensible method and means.

We will then choose a man who is fully acquainted with these conditions. The man who knows both the urban and rural community is the ideal man. Besides that he must have sterling character and worth, of course, good heredity, which this man has, and a genial and friendly personality. If we were just going to elect a man for no other reason than that, that is sufficient reason with his qualifications. However, we must think most particularly of what service he will render this profession and what service he will render the state. We want him to represent us well and thoroughly. In fact, over-represent us, we might say, because he is as much of the average as the rest of us and he is capable of doing that thing.

So, with these few words, then to mention his name is sufficient. I hope you will consider it seriously and favorably when I mention the name of Dr. William H. Breuer. (Applause.)

Just one more word about Dr. Breuer. He is a young man, aggressive, militant and fighting all the time for the betterment of the profession, a country product, is and always will be loyal to this Association; a man who has served half of his life time in it as an active and aggressive man, one that has always been ready to do anything, any duty assigned to him and do it well. (Applause.)

The nomination of Dr. Breuer was seconded by several delegates.

Dr. R. S. Vitt, St. Louis, moved that the nominations be closed. Seconded and carried.

Dr. Frank I. Ridge, Kansas City, moved that the President be empowered to cast the unanimous vote of the House of Delegates for the election of Dr. Breuer as President of the Association. Seconded and carried.

The President cast the ballot for Dr. Breuer and declared him elected President of the Association.

The President appointed Drs. A. R. McComas, C. B. Francisco, and Joseph W. Love to find Dr. Breuer and escort him to the platform.

Report of the Nominating Committee

Dr. James R. McVay, Kansas City, Chairman of the Nomination Committee, reported as follows:

Your Nominating Committee begs to submit for your consideration the following list of nominees:

Vice Presidents

First Vice President, G. C. Willson, Nevada.
Second Vice President, R. A. Woolsey, St. Louis.
Third Vice President, F. M. McCallum, Kansas City.
Fourth Vice President, Paul F. Cole, Springfield.
Fifth Vice President, U. P. Haw, Benton.

Councilors

14th District, C. T. Ryland, Lexington.
16th District, T. B. M. Craig, Nevada.
17th District, Guy Titsworth, Sedalia.
18th District, W. L. Allee, Eldon.
20th District, W. C. Gaylor, St. Louis.
23rd District, Charles W. Brown, Campbell.
24th District, T. W. Cotton, Van Buren.
26th District, J. A. McComb, Lebanon.
27th District, J. C. B. Davis, Willow Springs.
28th District, T. O. Klingner, Springfield.

Delegates to the American Medical Association

G. Wilse Robinson, Kansas City, 1926-1928, Alternate.
James R. McVay, Kansas City. W. J. Ferguson, Sedalia, 1926-1928. Alternate, A. J. Campbell, Sedalia. W. T. Elam, St. Joseph, 1926-1928. Alternate, H. L. Kerr, Crane.

Committee on Health and Public Instruction

W. T. Elam, St. Joseph. Term expires 1929. L. C. Chenoweth, Joplin. Term expires 1928.

Defense Committee

Charles E. Hyndman, St. Louis, Chairman; W. C. Gaylor, St. Louis; H. Unterberg, St. Louis.

Respectfully submitted,
JAMES R. McVAY, Chairman.

Dr. J. S. Gashwiler, Novinger, moved that the report be adopted, and that the nominees be declared elected. Seconded and carried.

The President announced that Dr. C. H. Wallace, St. Joseph, one of the outstanding medical men in the state and particularly in his own community, has filed for the legislature to represent Buchanan County in the House of Representatives.

Dr. E. H. G. Wilson, Cape Girardeau, informed the House that a very prominent citizen of his community, a successful farmer and also a banker, intends to file for governor of the state when the time to do so arrives, and that this gentleman stands one hundred per cent. with the medical profession.

Both announcements were received with applause. The President announced that the guest of our Association Dr. John A. Witherspoon, Nashville, Tennessee, was in the building and appointed Dr. Jabez N. Jackson to find Dr. Witherspoon and escort him to the House of Delegates.

Presentation of Dr. Witherspoon

The President introduced Dr. Witherspoon, who spoke as follows:

Mr. President and Members of the House of Delegates:

When I was invited by your Secretary to come up and meet with you my inclination was as it always is to accept an invitation where you can meet a lot of good fellows, and that means a lot. I want to say, Gentlemen, that I know of no body of men in all of my long professional career that have conducted themselves greater and grander in the fine work of humanitarianism than our own profession. I have to make a talk tonight, therefore, I shall not detain you with a long talk today. I want to express my very high appreciation of being permitted to be even a guest with you and one of you, and especially when I am introduced by my friend, Dr. Jackson. I have known Jackson longer than I care to tell you and he has always been a prince of good fellows, typifying what Ed Goodwin told me years ago of Missouri doctors—high class, ethical gentlemen. Gentlemen, I am proud to be with you.

The President called for the report of the committee on Revision of the Constitution and By-Laws.

Dr. M. P. Overholser, Harrisonville, Chairman of the Committee, read the report as follows:

Report of the Committee on Revision of Constitution and By-Laws

Mr. President and Members of the House of Delegates:

Your Committee on Revision of Constitution and By-Laws respectfully submit the following report: The special committee appointed by the House of Delegates of the American Medical Association have after mature thought formulated a constitution and by-laws which should be the standard for all constituent state societies and they have submitted them for consideration. Your Committee have studied the draft as proposed by the American Medical Association and recommend that it be adopted as the constitution and by-laws of the Missouri State Medical Association and this draft to be published in THE JOURNAL of the Missouri State Medical Association so that it can be legally voted upon and adopted at the next meeting of the Association. The Committee recommends also that we publish in THE JOURNAL the recommendations for amendments to the new constitution and by-laws which may be submitted by the component county societies after being legally voted upon by their membership.

It is further recommended that upon motion duly made and seconded and voted upon the Executive Committee of the Council may be empowered to employ a recognized firm of certified expert accountants to audit and report upon the books of the Missouri State Medical Association.

Respectfully submitted,
M. P. OVERHOLSER, Chairman.
F. I. RIDGE,
FRANK G. NIFONG,
W. A. CLARK,
C. J. HUNT.

At this point Dr. W. H. Breuer, the newly elected president of the Association, was escorted into the room and business was suspended while President North presented Dr. Breuer.

Address by Dr. W. H. Breuer

Dr. Breuer addressed the House of Delegates as follows:

Mr. President and Gentlemen of the Missouri State Medical Association:

I appreciate very greatly the honor that you have conferred upon me. Words are inadequate to express the deep gratitude I feel towards you gentlemen for this distinction and honor. Fully cognizant of the responsibility that this great honor entails upon me, I shall endeavor by all the power that God has given me to so regulate my life and the conduct of the affairs of this office that it will be a pleasure to myself and an honor to the medical fraternity of the State of Missouri.

I assure you gentlemen, when I look around here this morning and see so few of the familiar faces that were present when I became a member of the Missouri State Medical Association in nineteen hundred, and after twenty-five years of service in this Association, only missing two meetings of the society—that was in nineteen hundred and seventeen and nineteen hundred and eighteen when I was in the army—eighteen years on the Judicial Council of this Association, I have labored earnestly, always having in mind the best interests of the medical profession of this state.

I was talking this morning to my good friend, Dr. Nifong, who took me out for a drive through the park and he said to me: "Breuer, I believe that it is more important in the early training of a student that he be imbued with the high spirit of the ethics of the profession than it is for the technical and medical training." And I want to say to you gentlemen here this morning that all that I am and all that I ever hope to be I believe is due to the ethical training received during my student days and in the early years of my practice of medicine. Gentlemen, if you sat, there are many of you here who have, in the school under the training of the great men who have made history, medical history in the state of Missouri, you fully realize what it meant to you in your future life. And when I look around here this morning, my heart is made sad because I miss the faces of so many great doctors who were here years ago.

I want to recall the names of some of those who stand out, such men as Dr. W. S. Allee. You all remember him and loved him. Dr. Walter B. Dorsett, Dr. W. G. Moore, Dr. N. B. Carson, Dr. William McCandless. Last, but not least, is that noble character, that great man who held out above every personal interest in this life, the greatest of the medical profession of this state, Dr. Frank J. Lutz. (Applause.) And it is to Dr. Lutz that I owe my training, my ethical training. And to know Lutz, to be in his confidence and have his friendship, the privilege of sitting at his feet as it were, is one of the great pleasures of my life.

My friends, there are milestones in the life of every individual which stand out to mark the epochal periods of that life. I believe the first that I recall, I was graduated from high school. The next was when I received my degree as a doctor. I was proud of my diploma when I received it from the hands of the president of the board of directors of the Owensville High School, a little village out here in Gasconade county, Missouri, and at that time I felt that I was just about "it." A little later on—that was in eighteen ninety-three—in eighteen ninety-eight I received my degree from the Beaumont Hospital Medical College, and that night I felt it was the crowning glory of my existence. A little later on I was married and then I knew I had reached the height of my glory and from that day on I labored and worked as best I knew how and today my friends, this milestone shall stand out as one of the greatest in all my life, because in all the years that I have been attending these Association meetings and been interested in the medical profession of this state my ambition has been to one day be president of this great Association. You have crowned my efforts with that election.

Now, I have no comprehensive program to lay before you. I fully realize how high the standard has been placed by those who have gone before me and I fully appreciate how necessary it is for me to strive and endeavor to even approach in my feeble way the greatest achievements of my predecessors. When I think of the great achievements that have been made, that have been sponsored by the Missouri State Medical Association, I am appalled at the effort. We have had great men as presidents of this Association, and if you will pardon the reference, my good friend who is now the President of the Missouri State Medical Association has labored hard and earnestly. He has devoted much of his time, much of his energy, unselfishly, for the up-building of the medical profession in this state of Missouri. (Applause.) And I believe that he has sown the seed and has cast the bread upon the mighty waters, the fruits of which will be gathered many days hence. And I shall endeavor as best I can, with the help of you gentlemen throughout the state of Missouri, to carry forward this great work and the campaign of education so that the medical profession will be raised above the standard of commercialism as we are so often classed by the laity of this great city.

My friends, we are this year before the people; this is what we know as a legislative year. The coming January will witness the convening of a new legislature when, as in all the years past, legislation will be proposed by all the cults and irregulars for recognition in this state. As has been said on the floor of this House in the past days of this session the time is not opportune when the legislature meets to endeavor to forestall this, but after much study and careful consideration of the situation in the years that have gone by and profiting by the examples of the past, I believe that our hope lies in an education of the public in the things that we are trying to do. It has been my experience that if I want anything from the public in a civic way, if I want anything in a political way, if I want anything in a medical way, if I go to that public in a free and frank manner, take them into my confidence, lay all the cards on the table face up as it were, and tell them exactly what we are trying to do, I have never had any trouble to get what I was after. As president of this Missouri Medical

Association that shall be my policy throughout the state during the coming year. I am going to go before the people of this state on every opportunity that is afforded me and I am going to try to tell them and get them to understand what we, as medical men, are trying to do for the populace of the great state of Missouri.

As you all know, there is not a more unselfish profession in the world today than the medical profession. There is not one of you here under the sound of my voice this morning who does not do more charity every day of your lives than any one citizen in your community and you are doing it without any display, and the only reason that the medical profession has been in bad repute, and we have been, is simply because we have not taken the public into our confidence. We have always kind of sifted around and acted mysterious in all things that we wanted. But as president of this Missouri State Medical Association I am going forth in this state and endeavor to the best of my ability to get the people to understand that it is not selfishness on my part, that we are not trying to do these things for our own personal gain, but we are trying to do them for the betterment of humanity.

In this connection I believe that a great deal of the calumny that is heaped upon the medical profession of this state is due to our own attitude. You know that we as a profession are inclined to be jealous and are not always as charitable to our fellow practitioners as we should be. We are prone to just drop a little word here and a little word there just a little bit derogatory to the ability, to the character, and to the manhood of the fellow who is our competitor. My friends—it's not self-glory—I hope not a single drop of that jealousy exists in my blood. I believe that the boys who live out there in my community and who practice medicine along side of me will tell you that that doesn't exist in me. I say to you, my friends, and to my conferees, "Boys, you have got a business that belongs to you and that is yours; if they want you to do their business they don't want me and, therefore, I am not trying to steal your practice." And I have tried as best I could to live loyal and faithful to those principles.

All the trouble and jealousy that exists among the doctors of the various communities of this state is due more particularly to the lack of understanding and to a lack of real acquaintance with your fellow doctor than it is to any other cause. Your county medical society is the important factor in the elimination of that jealousy and if we as doctors, as medical men will rise above the petty jealousies and the commercialism of our profession and meet our fellow doctors in a county society, get really acquainted with them, know them as they are, a large part of the friction that exists throughout the medical societies of this state will dissolve like the mists before the sun in the morning. (Applause.) And I shall endeavor, with all the power that I have to create that spirit throughout the state, and I am going to spend my time and energy in visiting county medical societies of this state and I am going to preach that doctrine to them.

All of the jealousy and rivalry does not exist throughout the rural districts of this state; in the large cities I believe it exists to a greater extent than it does in the smaller communities. If you will only practice the great lesson as taught by the lowly Nazarene, of conceding to the other fellow that same thing that you want him to concede to you; practice that great principle of toleration, giving unto him and his ideas the same consideration that you give to your own, that he may be right and you may be wrong, because he is just as honest and sincere in his convictions as you are in your own, if you will only call yourself to task, and practice that principle in your everyday life, you will do away with all the strife that exists throughout the medical profession in this great state of Missouri today.

And I am going to ask you as men, as doctors, as representative citizens of this great state, as men who hold and lead public opinion, that you call yourselves to task and say, "From now on and henceforth I am going to do those things," and let us see if we can't place the medical profession in this state upon the high standard where it belongs, and not only demand but receive the respect of the entire populace of this great state of Missouri. (Applause.)

I am not going to detain you any longer. I know acceptance speeches and that sort of thing are tiresome to you. You have business you want to transact, but I want to ask you as members of the medical profession of this state, I am going to earnestly plead with you to help me in every way that you can to raise the standard of the medical profession in the eyes of the laity of this state. Let us go out and educate the public in the things that we are trying to do, and let us go forth from here today and tell them not only by words but by actions that we are not commercialists and that we are not striving for commercialism, or for selfish purposes, but that our great aim and our mission in life is to make the world better and more comfortable for humanity and when we have done that we have fulfilled the great responsibility of the mission which the Lord intended the medical profession of this state should occupy. (Applause.)

The President announced that the House would now take up the interrupted report of the Committee on Revision of Constitution and By-Laws, and asked Dr. Overholser to read the report again.

Dr. Overholser read the report and moved its

adoption. Seconded by Dr. J. S. Gashwiler, Novinger.

Dr. J. C. Morfit, St. Louis, moved as an amendment, the proposal submitted by the delegate from the St. Louis Medical Society as follows:

That the Council is hereby authorized and directed to employ Price, Waterhouse & Company to audit the affairs of the Missouri State Medical Association. He added as an additional amendment, That the audit include at least the years 1924 and 1925.

Dr. A. H. Hamel, St. Louis, seconded the motion.

Discussion by Drs. H. Unterberg, St. Louis; F. I. Ridge, Kansas City; L. C. Chenoweth, Joplin; J. C. Morfit, St. Louis; F. G. Nifong, Columbia.

The President asked Dr. Morfit if he understood that Dr. Morfit would substitute the statement that a reputable expert accountant be employed for the name of the particular one mentioned.

Dr. Morfit: Yes.

The President asked that the Chairman of the Committee on Revision of the Constitution and By-Laws and Dr. Morfit get together and draw up a proposition that might be acceptable.

During the interim the question was discussed by Dr. G. Wilse Robinson, Kansas City, and the President.

Dr. Overholser reported after conferring with the members of his committee that his committee did not favor changing the recommendations in its report and asked for a vote on the amendment offered by Dr. Morfit and the original report.

The President put the question on the amendment as introduced by Dr. Morfit. On the call of the Ayes and Nos the Chair stated that he was uncertain of the result.

Dr. Morfit asked for a record vote.

The President instructed the secretary to call the roll.

The secretary called the roll, the members responding as follows:

Vote on Amendment

The Secretary	Yes	No
H. S. Conrad, St. Joseph.....		No
J. S. Gashwiler, Novinger.....		No
B. P. Wentker, St. Charles.....		No
A. R. McComas		No
C. T. Ryland, Lexington.....		No
T. B. M. Craig, Nevada.....		No
Guy Titsworth, Sedalia.....		No
W. L. Allee, Eldon.....		No
R. S. Vitt, St. Louis.....		No
G. S. Cannon, Farnfeld.....		No
T. W. Cotton, Van Buren.....		No
W. H. Breuer, St. James.....		No
E. P. Taylor, Fairfax.....		No
F. G. Nifong, Columbia.....		No
H. W. Carle, St. Joseph.....	Yes	
J. F. Owens, St. Joseph.....		No
B. F. Carr, Polo.....	Yes	
E. H. G. Wilson, Cape Girardeau.....	Yes	
Joseph W. Love, Springfield.....		No
P. F. Cole, Springfield.....		No
R. D. Haire, Clinton.....		No
G. Wilse Robinson, Kansas City.....		No
H. M. Gilkey, Kansas City.....		No
J. R. McVay, Kansas City.....		No
R. W. Holbrook, Kansas City.....		No
E. F. DeVilbiss, Kansas City.....		No
F. I. Ridge, Kansas City.....		No
F. C. Rumsey, Kansas City.....		No
M. H. Clark, Kansas City.....		No
E. L. Stewart, Kansas City.....		No
M. J. Owens, Kansas City.....		No
L. C. Chenoweth, Joplin.....		No

J. A. McComb, Lebanon.....	No
H. L. Kerr, Crane.....	No
E. E. Higdon, Fredericktown.....	No
A. H. Marshall, Charleston.....	No
W. N. O'Bannon, New Madrid.....	No
A. J. Campbell, Sedalia.....	No
S. L. Baysinger, Rolla.....	No
S. L. Durham, Dearborn.....	Yes
J. E. Brown, Perry.....	No
E. Schulz, St. Charles.....	No
J. E. Armstrong, Kirkwood.....	Yes
W. W. Graves, St. Louis.....	Yes
C. E. Burford, St. Louis.....	Yes
A. H. Hamel, St. Louis.....	Yes
J. C. Morfit, St. Louis.....	Yes
T. C. Hemplemann, St. Louis.....	Yes
Wm. Kerwin, St. Louis.....	Yes
H. Unterberg, St. Louis.....	Yes
A. Rayold, St. Louis.....	Yes
S. T. Bassett, St. Louis.....	Yes
W. D. Black, St. Louis.....	Yes
V. B. Kieffer, St. Louis.....	Yes
U. P. Haw, Benton.....	No
Frank LaRue, Dexter.....	Yes
Leslie Randall, Licking.....	No
E. C. Wittwer, Mountain Grove.....	No
Total, Yes, 18; Total, No, 41; Absent or not voting, 27.	

The result of the roll call was announced eighteen voting yes and forty-one voting no. The president declared that the motion to adopt the amendment introduced by Dr. Morfit had failed to carry.

Vice President Kerr took the Chair.

The Vice President announced that the question now before the House was the adoption of the report of the Committee on Revision of the Constitution and By-Laws as submitted. The question was put and the Chair announced that the report had been adopted.

Dr. J. C. Morfit, St. Louis, moved that the Council be authorized and directed to employ a recognized firm of public accountants to audit the affairs of the Association for the years 1924, 1925 and up to date.

Dr. F. G. Nifong, Columbia, seconded the motion. President North resumed the Chair.

Dr. Morfit's motion was discussed by Dr. A. R. McComas, Sturgeon.

The President reminded the members of the House that this motion by Dr. Morfit had already failed of adoption by a vote of 41 to 18.

Dr. G. Wilse Robinson, Kansas City, moved that the House adjourn sine die. This was duly seconded and carried.

MINUTES OF THE COUNCIL

Class Room, St. Louis University Law School,
St. Louis

Monday, May 17, 1926

The Annual Meeting of the Council was held in the class room of the St. Louis University Law School, St. Louis, Monday, May 17, 1926, and called to order by the Chairman, Dr. A. R. McComas, Sturgeon, at 1:45 p. m. At roll call, fifteen Councilors answered present as follows:

- 1st District, Austin McMichael, Rockport.
- 2nd District, H. S. Conrad, St. Joseph.
- 4th District, Geo. M. Bristow, Princeton.
- 6th District, J. S. Gashwiler, Novinger.
- 8th District, B. P. Wentker, St. Charles.
- 9th District, A. R. McComas, Sturgeon.
- 11th District, J. H. Timberman, Chillicothe.

14th District, C. T. Ryland, Lexington.
16th District, T. B. M. Craig, Nevada.
17th District, Guy Titsworth, Sedalia.
18th District, W. L. Allee, Eldon.
20th District, R. S. Vitt, St. Louis.
22nd District, G. S. Cannon, Farnfelt.
26th District, W. H. Breuer, St. James.
27th District, J. C. B. Davis, Willow Springs.
Dr. G. W. Hawkins, Salisbury, moved that the reading of the minutes of the last annual meeting be dispensed with and adopted as published in THE JOURNAL. Seconded and carried.

The Chairman read the report of the Executive Committee as follows:

Report of the Executive Committee

The Executive Committee held one meeting during the year. Many matters coming up were attended to by correspondence.

One member of the Council, Dr. J. P. Burke, California, Councilor of the 18th District, who had served long and faithfully died on August 31, and Dr. W. L. Allee, Eldon, was appointed to fill the term ad interim.

An attempt was made to organize Ozark County Medical Society by Dr. J. C. B. Davis, Willow Springs, Councilor of the 28th District, in June, 1925. On account of the small number of physicians in the county the doctors decided that it was impractical to maintain a separate organization. They were invited to join organized societies in adjoining counties.

Dr. W. H. Vogt, St. Louis, Councilor of the 20th District, resigned and Dr. R. S. Vitt, St. Louis, was appointed to serve in his stead until this annual meeting.

The work of the secretary's office grows more voluminous every year, especially this year on account of the large number of councilor district meetings attended by the President and the Secretary. These meetings were well attended and were productive of great good. It would seem wise to continue such meetings.

With the increase in funds in the treasury, postgraduate meetings could be held in the various districts, the expenses of the speakers attending such meetings to be paid in whole or in part by the State Association if in the judgment of the House of Delegates this plan is feasible. The states of Wisconsin, Michigan, and other states are doing this service with great satisfaction to the smaller communities. A speaker of eminence from outside of the state could be invited to the larger societies on the same terms.

When the details of this plan, if it is adopted, are worked out notice of the various meetings, the time of holding them, the names of speakers and their subjects should be published, and every member of the State Association should feel privileged to attend. In this way, all members would be brought into closer contact and harmony with each other.

The Journal

THE JOURNAL is still being printed under the contract made in 1925 with the Fulton Gazette Publishing Company, Fulton, Missouri. During the past year, THE JOURNAL has contained 116 more pages than ever before. The advertising income has materially increased over previous years. Our JOURNAL compares favorably with any of the state association journals in the subject matter, variety of topics discussed, and for actual value of its contents. The editing typography and its general make-up are above the average of like publications.

Finances

Our financial condition is better than at any time since our ill-fated foray in the referendum field and the consequent legal battle on the Medical College Bill with which you are familiar. We now have in the treasury in all funds over \$17,000 to carry us through the year, which is more than twice as much as we had last year, but that fact should not lead us into the error of spending this money unwisely.

In the model constitution and by-laws prepared by a special committee of the House of Delegates of the American Medical Association, among many other wise provisions, a budget system and auditing of the finances of the Association are provided for. With the increase in our finances, the Council recommends that we adopt the budget system at this meeting. Our by-laws now provide for the auditing of the accounts of the Association by a committee of the Council.

Dr. C. T. Ryland, Lexington, moved that the report of the Executive Committee and its recommendations be adopted by the Council and made the report of the Council to the House of Delegates. Seconded and carried.

The report of the Defense Committee was considered and approved and on motion \$1,000 was appropriated to the defense fund.

The report of the Treasurer was received and referred to the Auditing Committee.

The report of the Secretary was received and referred to the Auditing Committee.

The Secretary informed the Council that Dr. H. G. Grosby, St. Louis, had appealed to the Council from the action of the St. Louis Medical Society in refusing to elect him a member.

THE CHAIRMAN: When was this appeal made?

THE SECRETARY: The appeal was originally made in 1922 from the action in the St. Louis Medical Society in 1918. Dr. Grosby was notified to appear before the Council in 1922 but failed to do so and the Council ordered the matter laid over. I understand although I am not officially informed, that Dr. Grosby was again refused membership in the St. Louis Medical Society about a week ago.

The Chairman appointed the following committee to hear the testimony in the appeal of Dr. Grosby and report to the Council for action: Dr. R. S. Vitt, St. Louis; Dr. Guy Titsworth, Sedalia; Dr. G. M. Bristow, Princeton.

The Chair appointed the following auditing committee to audit the books of the treasurer and of the secretary: Dr. C. T. Ryland, Lexington; Dr. T. B. M. Craig, Nevada; Dr. W. L. Allee, Eldon.

The councilors reported about conditions in their districts as follows:

REPORTS OF COUNCILORS

First District

DR. AUSTIN McMICHAEL, Rockport: The First District comprises Atchison, Holt and Nodaway counties. They have been holding meetings quite frequently except in Atchison county which hasn't held quite as many meetings as the other counties. There are about fourteen doctors in the county, and we have had about four meetings in the last year. They were fairly well attended.

Holt county held more meetings than that. Nodaway county, I don't know much about; it is a large county and Maryville, the county seat, where most of the doctors live, is quite a large town. I haven't had a report from them but I understand they have been having fairly good meetings and good attendance. I think the district as a whole is in fairly good shape.

Second District

DR. H. S. CONRAD, St. Joseph: We have our regular bi-monthly meetings of the Buchanan County Society. Andrew County is associated with us but not organized. The activities of the society have been better in the past year than at any year since I have been a member of the society. There was some contention along the first of the year about raising the dues but I think everyone now feels it is one of the best things that ever happened to the society. We haven't lost a single member. In fact our membership is greater right now than it ever has been in the past. I think there isn't a member in our society that would care to drop back to the lower dues.

The ladies' auxiliary of the local society is the most important thing I have to mention today. They have been unusually active and have done more towards spreading the good name of the doctor than anything we have had in our county. Those women have practically all of the school districts organized and they have a subscription list to *Hygeia* in all the public schools. In fact they have subscribed for over three hundred and fifty copies. Those go into the public schools and doctors' offices and that has done a lot to create sentiment for the doctor.

I don't know how the fellows feel about the various cults and quacks, but it seems to me the greatest thing the regular physician has to contend with is his own inactivity. The school physician is an osteopath; the health director of the Y. W. and Y. M. C. A. are osteopaths, just because the regular physician didn't care to bother himself with that sort of thing. But the last year we have taken it upon ourselves to do things. For instance, in examining the high school children and grade school children, and those have been taken away from the osteopath.

We have had several cases where a doctor would agree to cooperate with us on this matter and then when the time came to examine the children failed to meet us. Of course that created a lot of antagonism. But it seems to me to be a fine opportunity for the medical profession and has caused the doctor to feel he has come into his own in the past year more than at any other time I have known. And I think it is done through the little magazine, *Hygeia*. I believe in it because I have school children come into my office and ask me to read it, and in several cases I have had mothers call up and personally subscribe

for it. I think there are about five hundred copies spread around through the schools and civic organizations.

There are about three members involved in law suits. One was a non-suit, one was suspended, and one was thrown out of court before it came to trial. The members in our county have all agreed that it has been well covered by privately handled insurance. When you get your workmen's compensation act going there will be less damage suits. But there is a lot more to be done because the doctor seems to be the "fall guy." So we tried to get a hundred per cent. membership insurance, the private insurance.

Fourth District

DR. G. M. BRISTOW, Princeton: My report will be short. The Fourth District is very inactive, has been for the past year. I have visited each county in my district once. I will say in one of my counties they reported wonderful meetings, one of the heads of the county societies said at this meeting that he was president, he was the secretary, and he was the audience. That is the only county I am able to report of having held a meeting. A few of my counties have one meeting a year. That is about the extent of what was accomplished in our district, after making me councilor of that district, I am sorry to say. But there has been some reason for this. There has been a decrease in the membership by reason of doctors moving out of the counties. One doctor in my home county moved into the city and contracted with the irregulars at so much a month. However, he has not paid his dues for this year.

In my own county we have an average of about one meeting every six months. It seems difficult to get them to realize the importance of getting together and the harmony that should be cultivated. There is too much discord in our own territory, and I have been trying to see how much. We need working up in some of Dr. North's public meetings, to work out a better feeling among the profession and the public and better feeling towards the profession in general. We need some missionary work of that kind going on in our territory.

Sixth District

DR. J. S. GASHWILER, Novinger: We intended having a district meeting but the roads presented a great obstacle. We have been examining the school children in our town. I have been trying to get the county medical society to help but I have been unable to do so. I think we should take some action through the state organization to get the county societies to assist for that is one way of introducing the medical profession to the public. Our schools are not able to pay for this examination and it is a several days job. I spoke to the county medical society and one of the doctors came over once. We examine the children three times a year, and it is quite a task. The county society and the state association should be doing that work and when the schools are able to pay they can pay for it.

Our society has been a little dilatory about meeting in the last year. The profession in our district is becoming less popular in point of numbers, lots of doctors dying and lots of them moving out and our percentage of membership has decreased from lack of numbers more than anything else. One of the reasons is because we have three hospitals in our county now whereas a few years ago we didn't have any. The doctors at the cross roads are all leaving, some of them dying. Consequently, we are not making proper progress.

Eighth District

DR. B. P. WENTKER, St. Charles: I visited the St. Louis County within the last year and the meetings of the St. Charles societies and for both of these counties I will report activity that is good and wholesome. We have not been interested so much in the examining of children of the various schools because the men in these various school districts have taken it upon themselves and are doing good work along those lines. After all, all the authority we have is that of advice or recommendation.

I have never heard from the Secretary of Pike County. I don't know when they had a meeting there. There does not seem to me any effort towards establishing a society.

In St. Charles County the doctors gather rather frequently. We have two or three meetings of the county society a year and in addition to that we have a hospital staff society that includes almost all the members in St. Charles County, and we meet once a month or once every other month. In the summer months we don't have any meetings. Outside of that things look prosperous and good.

We have one condition to contend with in the County of St. Charles, insofar as it is the hot-bed for furnishing the material for the various cults. We have had a man that is the state representative in our county, a man who takes it upon himself to fight the regular profession of medicine wherever opportunity presents itself. Now, this man was running for office this year and of course we have our man we are going to do our level best to put our man over. The members are working hard and in unison and I think it will be successful in eradicating this undesirable creature from our community.

Just the other day our newspaper came out with a nice caricature. I don't know what cult or society brought it up; there is a sample of it. (Passes the copy of the paper.) Undoubtedly the editor of this paper had apologized for this caricature appearing in his paper and claims

it was the syndicate that placed it there without his knowledge. Of course that was not an excuse. A committee was appointed to wait on the editor and demand an apology. I do not know what the end result will be.

Ninth District

DR. A. R. McCOMAS, Sturgeon: I have visited most of the counties in the Ninth District in the past year and have been in communication with the others. We have been doing fairly well, fairly good work, but you know Warren County is not and has never been organized, conditions there being such that it seems impossible to get a stable organization.

The county society of Howard County has been down for several years, perhaps just two or three or four members paying their dues. Last fall they organized and I have hopes that they will do something. The other counties of the district seem to be in good condition as they have been for the past several years.

Eleventh District

DR. J. H. TIMBERMAN, Chillicothe: The Eleventh District consists of Chariton, Carroll, Livingston and Linn counties. Chariton County and Carroll County I have not visited, but they have been having their meetings and I think both counties are functioning in a wholesome way. Linn County is well organized. They had a meeting in Brookfield with about twenty or twenty-five present. The officers have started in an enthusiastic manner to do everything they can. I want to say here that the councilor district meeting resulted in reorganization of that county. I had made a trip to that county and I had written also asking that I might be invited to their next meeting. They have not had a meeting for three years, in a county of sixty-seven thousand people. I visited the county in time for reorganization but their inspiration to get into the harness again came from those Fellows who were at our District meeting in Chillicothe. Dr. Clendenning, Dr. Gradwohl, and Dr. Robinson were there and Livingston County acted as host in making that a success.

Livingston County has very efficient officers. We have been working with the Women's Federated Clubs to have clinics for the examination of crippled children.

I want to say with reference to the reorganization by the way of Linn County that it looked at first like a poor proposition but when Dr. Burke made his report showing something over a hundred dollars in the treasury it showed they have some real good officers. Incidentally, they assessed no county dues for this year.

Fourteenth District

DR. C. T. RYLAND, Lexington: The most important thing I can say for that district is that we appoint a new councilor up there. I don't believe in holding office too long, you know. I have been in ever since Dr. Ferguson joined the Medical Society of Missouri. For the first few years I was pretty active in learning the duties of councilor, and then the next few years I was active in attending to those duties, and in the last few years I have been slowing down. I haven't visited a county in my district except my own. We have some good activities and some good active counties in my district. Lafayette County has been very active. We have had meetings every month when the roads were at all permissible. Every man in the county is a member of this society. We have taken an active part in the school examinations. In Lexington I think the members of our society have carried on all the examinations. We have not only done that but a good deal of charity work.

I think the Women's Auxiliary has been a help to us. They are right active in our county. I think the most beneficial thing I have seen, my wife is the state treasurer, and she has the funds, I haven't been broke this year! But I do feel that a councilor can stay in too long. We get a little cold after we have been in a long time and while we keep at it and do it in a desultory sort of way I believe a good idea would be to change councilors once in a while, but not too often, say about fifteen years. Five years to learn the work, five to carry on and five to die out.

Sixteenth District

DR. T. B. M. CRAIG, Nevada: The best thing that happened to the Sixteenth District was the visit from our President and Secretary. We had a splendid meeting and the Commercial Club was very helpful in having a dinner and get-together meeting. We had addresses from some gentlemen. In the afternoon we had a scientific program which was very good, and I might say the activities of Vernon-Cedar County have been very good and very helpful. Bates County I visited last month and they had a nice meeting and had some outside talent. In Barton County we were unable to get a meeting but we went down there and got enough members to pay their dues to sort of get in line again. In Dade County we have been unable to get any activity. I think, taking it as a whole our district is in fair shape and much better than it was a few years ago.

Seventeenth District

DR. GUY TITSWORTH, Sedalia: There is not a great deal to report from Benton, Henry and Pettis counties for they have been holding very good meetings, and holding them regularly. St. Clair County, unfortunately, is not active.

We have unfortunately not enough members down there. I don't know of any trouble in our district. We had a little trouble with a couple of advertisers. One of them we have suspended from membership and the other, who was not a member of our society, had made application and the board of censors did not see fit to accept him and he went back to the county from which he originally came.

Eighteenth District

DR. W. L. ALLEE, Eldon: The counties of Miller and Moniteau are pretty well organized and fairly active. We have a plan to affiliate Morgan County with Miller County until they reorganize their own county.

The medical society in Miller County was instrumental in securing county health nurse. The nurse is partly paid by the county. This nurse has organized every school district in the county and has a complete record of every child of school age. The work has been very satisfactory and I think it has helped the medical society by the interest we have taken in these children.

Twentieth District

DR. R. S. VITT, St. Louis: I have been a councilor just sixty days. I haven't anything to report from the Twentieth District except that appeal which has been referred to us. I want to say to Dr. Bristow that we will meet the Committee tomorrow at 9:00 o'clock right here. The St. Louis Medical Society will have their evidence here and such other information as we want.

Twenty-Second District

DR. G. S. CANNON, Fornefeld: We have had a society in each one of our counties in the district and all have fairly good meetings. We have tried to have Dr. North down there long before the Dallas meeting to hold a meeting in Cape Girardeau, but couldn't get anybody to sponsor it. I will say the county societies are all doing fairly well. I don't know that we have lost any members. Scott County has lost five or six since we have raised the dues, but I haven't heard any complaints from the rest of the counties. We have held a meeting for the purpose of examining children, which was very successful.

Madison County has done wonderful work. Hygeia has done wonderful work in our counties.

Twenty-Sixth District

DR. W. H. BREUER, St. James: The best thing I can report from the Twenty-sixth District is the meeting held down there by the President and the various officers of the Missouri State Medical Association which was held in Rolla last July, and I want to tell you we had one of the most successful meetings we have held in some months. We had a very excellent attendance. Doctors from all over the state were there. I think there were fifty doctors in attendance, outside of our own county, and we had a very excellent meeting, which was conducive of a great deal of good.

We had a public meeting in the afternoon, and again at night, at which the governor was present and made an address, and there were several very prominent men from over the state who gave addresses. I think the greatest good that could be accomplished in the state of Missouri is an educational campaign of getting the public to understand what we are trying to do, and what we want to do for them, and get them to appreciate that it is not for our personal interest that we are trying to do these things.

The sentiment from that day on is for just whatever the doctors want. I have had laymen come to me since the men began to announce for office in this campaign, and say, "What about that fellow, will he stand by you? If he ain't going to do the right thing we won't vote for him."

Take in Crawford County, there is a very small number I believe there are eight doctors in Crawford County. Their society consequently is not very active. They meet about three times a year, and they have some real good papers.

In Dent County there is not a doctor outside of the city of Steelville in the entire county. Pulaski County has a few more, a real active society. Dr. Oliver is the secretary, has been for years, and he keeps the society together. They have an annual picnic each year with their wives and families at a camp on the Gasconade River, and have a very elegant time. We have our annual picnic in August and meet down at Meramec Springs with our families, and we have a real get-together picnic.

Laclede County has a real active society. Dr. Billings is secretary of it. My experience has been that the only way in the world we are going to get anywhere is to take the public into our confidence and quit beating around and trying to put something over without telling them what we want to do. I have never had any trouble in getting anything from my people. The county societies are just merely a stepping stone, and the meetings of county societies should be more social. You get tired of medicine, medicine; in our offices we get enough of the ailments and troubles and trials of other people. I just love to get somebody who won't talk about being sick, or having a bug somewhere. I think the social part should be better than it has been in the past.

Twenty-Seventh District

DR. J. C. B. DAVIS, Willow Springs: The Twenty-Seventh

District Counties are all organized and active except Ozark and that appears to be hopeless. There are only two or three regular doctors in the county which is sparsely settled and we have been making an effort to get them to attend and possibly unite with the Howell-Oregon society. The Howell-Oregon society meets regularly and we had with us during the season our President, Dr. North, our Secretary Goodwin, and Doctor Stewart and had a very enthusiastic meeting. Wright-Douglas County meets regularly, with good interest, and always have good programs. I made one trip over Ozark County, a distance of about seventy-five miles, and tried to organize it but the situation was very clearly hopeless. We had a meeting, and there were only two doctors present who were eligible to membership. The others were not. Of course there was nothing I could do with those who were not eligible.

The Chairman reminded the members that Dr. Gashwiler, Councilor of the 6th District, had brought out a point in his report that had been discussed in the Council on previous occasions, namely, the examination of school children by members of the county medical societies. The Chairman stated that this work had been encouraged by the Council and he would like to have the matter put in the record and would therefore entertain a motion on the subject.

Dr. Gashwiler moved that the Council recommend that the House of Delegates instruct the Secretary to communicate with the component societies, requesting the members of the societies to aid in the examination of school children where there is no resident examiner or where the county health officer or deputy state health commissioner does not perform this service. Seconded. The motion was discussed by Drs. Cannon, Hawkins, and Wentker, after which the motion carried unanimously.

In the absence of Dr. Spence Redman, Councilor of the 12th District, who was prevented from attending on account of illness, the Secretary read the following report from the Caldwell County Medical Society:

Report of Caldwell County Medical Society

The Caldwell County Medical Society has held six meetings since May, 1925. There was an average attendance of 9½ physicians, including several visitors. Rainy weather and bad roads made it impossible to hold more meetings.

At the beginning of the year we had 17 members in good standing, which included all physicians in the county eligible for membership but one. Three more have located in the county since but none have applied for membership. Four members have failed to pay dues for the year 1926. This leaves 13 members in good standing, including myself as an Honor member but still active.

The advancement of the state dues probably has decreased our membership.

The Society is in good working order and we expect to have a good year.

TINSLEY BROWN, Secretary.

On motion the report was ordered published in THE JOURNAL.

CHAIRMAN MCCOMAS: At the last Annual Meeting you will recall that the Council instructed the Chairman to purchase a gift for Mr. Morton Jourdan, our attorney, who has given his services gratuitously for many years. I wanted to exercise all possible care in the selection of this gift, and therefore I have taken a great deal of time in deciding upon what we should present to him. I found among other things a beautiful piece of very old silver, how old it is I do not know at this time, but we are waiting for the confirmation of its age and authenticity of its origin which must come from England. When this report is received, if it is found satisfactory, the deal will be consummated and the plate presented to Mr. Jourdan.

On motion the Council adjourned until Wednesday, May 19, immediately after the session of the House of Delegates of that day.

Wednesday, May 19, 1926

The Council was called to order by the Chairman, Dr. A. R. McComas, Surgeon, at 12:30 p. m. Wednesday, May 19, 1926.

The Secretary called the roll and announced a majority of the Council was present.

The Secretary read the minutes of the previous meetings of the Council. The Chairman announced that if there were no objections or amendments to the minutes they would stand approved as read. No objections or amendments being offered, the Chair declared the minutes approved as read.

The committee appointed to hear the appeal of Dr. H. G. Grosby, St. Louis, reported as follows:

Report of Committee on the Appeal of Dr. H. G. Grosby

Mr. Chairman and Gentlemen of the Council:

Your committee appointed to hear the evidence in the appeal of Dr. H. G. Grosby, St. Louis, whose application for membership in the St. Louis Medical Society was rejected, have to report that we have listened to the evidence on both sides of this case and we recommend that the action of the St. Louis Medical Society be sustained.

G. M. BRISTOW,
GUY TITSWORTH,
R. S. VITT, Chairman.

Dr. G. S. Cannon, Fornfelt, moved that the report of the Committee be adopted and that the Council instruct the Secretary to notify Dr. Grosby, and the St. Louis Medical Society of this action.

The motion was seconded by Dr. T. W. Cotton, Van Buren, and carried unanimously.

Dr. C. T. Ryland, Lexington, reported for the Auditing Committee as follows:

Report of the Auditing Committee

Mr. Chairman and Members of the Council:

We your auditing committee have audited the books of the Treasurer and the Secretary's accounts and find them to be correct. We have checked the Treasurer's vouchers with the books and find them correct.

T. B. M. CRAIG,
W. L. ALLEE,
C. T. RYLAND, Chairman.

Dr. T. W. Cotton, Van Buren, moved the adoption of the report. Seconded and carried.

The next order of business was the election of officers.

Dr. G. S. Cannon, Fornfelt, nominated Dr. G. W. Hawkins, Salisbury, for Treasurer. Seconded by Dr. Craig. There being no other nominations, it be declared elected Treasurer of the Association. was moved and the motion carried that Dr. Hawkins

Dr. C. T. Ryland, Lexington, nominated Dr. E. J. Goodwin, St. Louis, for Secretary-Editor. The motion was seconded by several. Dr. Ryland moved that the ballot for the election of Dr. Goodwin be cast by rising vote. This was seconded and carried and Dr. Goodwin was declared unanimously elected Secretary and Editor.

Dr. W. H. Breuer, St. James, took the chair.

Dr. T. B. M. Craig, Nevada, nominated Dr. A. R. McComas, Surgeon, for Chairman of the Council. The nomination was seconded by Dr. T. W. Cotton, Van Buren.

Dr. G. W. Hawkins, Salisbury, moved that the nominations be closed and that the president-elect be instructed to cast the vote of the Council for the election of Dr. McComas as Chairman. Seconded and carried.

Dr. Breuer cast the vote for Dr. McComas and declared him elected Chairman of the Council.

Dr. McComas resumed the Chair and thanked the members for the honor of electing him again and said he appreciated the confidence and cooperation of the members.

The election of the Secretary of the Council was the next order of business. It was moved and seconded that Dr. E. J. Goodwin be re-elected Secretary of the Council. Carried.

Dr. J. H. Timberman, Chillicothe, moved that Dr. A. R. McComas, Surgeon, Dr. W. C. Gayler, St.

Louis, and Dr. W. L. Allee, Eldon, be elected the Executive Committee of the Council. Seconded.

Dr. Breuer put the motion which carried unanimously.

The Chairman spoke of the proposition in the report of the Executive Committee to inaugurate postgraduate meetings in the councilor districts, and to continue the trips of the President and Secretary to councilor district meetings. There could be combinations of these meetings where feasible, or separate meetings if that were found more convenient for the members. He suggested that a committee selected by the Executive Committee might have charge of the work and assign the speakers to the postgraduate meetings. The expenses of these speakers and of the trips of the President and Secretary to be paid in whole or in part by the Association.

The question was discussed by Drs. Hawkins, Cotton, Cannon, Craig, Titsworth.

Dr. Cannon moved that the Executive Committee be directed to take charge of these meetings, conferring with the councilors and the county societies in the district in arranging for the meetings. Seconded and carried.

The Chairman inquired what the Council wished to do in regard to paying the expenses of the speakers and the President and Secretary on these trips. Dr. Cannon reminded the members that when the dues were raised last year it was stated that one of the objects to be attained was the establishment of meetings of this kind, and he moved that wherever it is necessary to spend money in connection with these meetings, the executive committee be empowered and authorized to draw upon the Treasurer for such expense. The motion was seconded and carried.

THE CHAIRMAN: There is another provision in the report of the Council which should be acted upon, namely, providing a budget system and auditing the finances of the Association.

Dr. Cannon moved that the Executive Committee establish a budget system of the expenses of the Association. Seconded and carried.

The Chairman stated that he had been unable to hear all that was said in the House of Delegates about auditing the accounts by an expert accountant because the acoustics were not good, but he asked what the pleasure of the Council was in regard to that subject.

Dr. Hawkins, Treasurer, said he wanted to go on record in this matter and therefore moved that the Council employ a certified public accountant to audit the books of the Secretary and of the Treasurer for the years 1924, 1925, and up to date, and that the choice of the accountant be made by the Executive Committee of the Council. Dr. Goodwin seconded the motion.

After discussion by Drs. Breuer, Cotton, Goodwin, Hawkins, Gayler, and Timberman, the motion carried.

Dr. T. B. M. Craig, Nevada, moved that Dr. T. W. Cotton be elected Chairman of the Publication Committee, and that Drs. Bliss and Francisco be elected members of the Committee. Seconded and carried.

Dr. Breuer suggested that since the funds of the treasury now amounted to more than seventeen thousand dollars, the bond of the Treasurer be increased to twenty thousand dollars. Dr. Guy Titsworth moved that the bond of the Treasurer be increased to twenty thousand dollars. Seconded and carried.

On motion, adjourned.

MINUTES OF THE GENERAL MEETING Auditorium, St. Louis University Law School, St. Louis

Tuesday, May 18, 1926—Morning Session

The first scientific session of the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, Tuesday, May 17, 1926, was devoted to the presentation of clinics and demonstrations in the various departments of the Washington University School of Medicine and the hospitals under the control of the University.

Tuesday, May 18, 1926—Afternoon Session

The second scientific session was held in the Auditorium of the St. Louis University Law School, Tuesday, May 18, 1926, and was called to order by the President, Dr. E. P. North, St. Louis, at 1:45 p. m.

The first paper on the program was read by Dr. Clyde O. Donaldson, Kansas City, on "Radiation in the Treatment of Non-Malignant Conditions of the Uterus."

This paper was discussed by Drs. H. S. Crossen, St. Louis; T. J. Beattie, Kansas City; Henrietta A. S. Borck, St. Louis.

Dr. H. S. Crossen, St. Louis, read a paper on "The Management of Various Types of Bleeding Uterine Myoma."

This paper was discussed by Drs. Edgar F. Schmitz, St. Louis; J. T. Hornback, Nevada; Dr. Crossen closing the discussion.

The following papers were read in the Symposium on Obstetrical Emergencies:

"Care and Treatment of Eclampsia," by Dr. Geo. F. Pendleton, Kansas City.

"Occipito-Posterior Presentation," by Dr. L. M. Riordan, St. Louis.

"Breech Presentations," by Dr. W. C. Gayler, St. Louis.

"Significance of Meconium in the Vagina During Labor," by Dr. F. E. Wilhelm, Kansas City. (Read by Dr. T. H. Aschmann.)

"Management of the Syphilitic Expectant Mother," by Dr. T. H. Aschmann, Kansas City.

The discussion on the Symposium was opened by Dr. Geo. Gellhorn, St. Louis. He was followed by Drs. Percy Swahlen, St. Louis; E. Lee Dorsett, St. Louis; Wm. Kerwin, St. Louis; G. D. Royston, St. Louis.

Wednesday, May 19, 1926—Morning Session

The third meeting of the scientific session was called to order by the President, Dr. E. P. North, St. Louis at 9:30 a. m., Wednesday, May 19, 1926, in the Auditorium of the St. Louis University Law School.

The Diagnostic Clinic on Chest Diseases was demonstrated by Drs. Sam Snider, Kansas City; C. H. Nielson, St. Louis; LeRoy Sante, St. Louis.

The Diagnostic Clinic on Heart Diseases was demonstrated by Dr. J. C. Lyter, St. Louis, and Dr. P. T. Bohan, Kansas City.

Wednesday, May 19, 1926—Afternoon Session

The fourth meeting of the scientific session was called to order by the President, Dr. E. P. North, St. Louis, in the Auditorium of the St. Louis University Law School at 1:50 p. m.

The following papers were read and discussed:

"The Diagnosis of Gallbladder Disease," illustrated by lantern slides, by Dr. Evarts A. Graham, St. Louis.

"The Gallbladder and the Surgeon," by Dr. Francis Reder, St. Louis.

The discussion on these two papers was opened by

Dr. H. P. Kuhn, Kansas City. He was followed by Dr. F. G. Nifong, Columbia.

"What We Accomplish by Operating Upon Exophthalmic Goiter Patients," illustrated by lantern slides, by Dr. Willard Bartlett, St. Louis.

Dr. Bartlett's paper was discussed by Dr. M. A. Bliss, St. Louis.

"The Surgical Goiter," by Dr. Kerwin Kinard, Kansas City.

Dr. Kinard's paper was discussed by Drs. E. V. M. Mastin, St. Louis; Hudson Talbott, St. Louis; C. J. Hunt, Kansas City.

"Non-Tuberculous Hips in Children Simulating Tuberculosis," by Dr. C. B. Francisco, Kansas City.

"The Treatment of Tuberculosis of the Hip," by Dr. J. Albert Key, St. Louis.

The discussion on these two papers was opened by Dr. M. L. Klinefelter, St. Louis, and continued by Dr. R. M. Schauffler, Kansas City.

"Some Points on the Diagnosis of Brain Abscess," by Dr. O. Jason Dixon, Kansas City.

The discussion of this paper was opened by Dr. F. J. Tainter, St. Louis, and continued by Drs. Robert Barclay, St. Louis; W. D. Black, St. Louis; Ernest Sachs, St. Louis; and closed by Dr. Dixon.

The paper by Dr. H. K. Wallace, St. Joseph, on "Acute Appendicitis, With Report of 600 Consecutive Cases," was read by title on account of the lack of time to deliver it in person.

Wednesday, May 19, 1926—Evening Session

The fifth meeting of the scientific session was called to order by the President-Elect, Dr. William H. Breuer, St. James, at 8:20 p. m. in the Auditorium of the St. Louis University Law School.

The President, Dr. Emmett P. North, St. Louis, delivered the President's Address entitled "Responsibility of Organized Medicine to the Public."

Dr. North resumed the Chair.

Dr. North introduced the guest of the Association, Dr. John A. Witherspoon, Nashville, Tennessee, who delivered an address on "The Achievements of Scientific Medicine in the Past 25 Years."

The President introduced Dr. Jabez N. Jackson, Kansas City, President-Elect of the American Medical Association. Dr. Jackson spoke as follows:

Address of Dr. Jabez N. Jackson President-Elect American Medical Association

Mr. President, our Distinguished Guests, Gentlemen of the Missouri State Medical Association and Ladies:

There are two reasons why I am unable tonight to deliver to you the very magnificent formal address that I had contemplated when I came here. The first of them, because anger in my soul has ruined all the flights of oratory in my mind. I don't know why it is, this little fat cousin of mine [Dr. North] should be jealous of me. I arrived this morning and I had a dinner coat and sent it out to be fixed up so I could appear tonight in it and he, in order to place me at a handicap, had the tailor's department in the hotel locked up, so when the suit should have been returned to me this afternoon and I was running around wildly in my B. V. D.'s waiting for the porter to bring my suit, the tailor departed and nobody knew where the suit was. Eddy Goodwin offered to lend me his, but I was afraid this would still cause me to appear in "half-undress," so this little fluttering that came into my mind sort of knocked the oratory out of me. (Laughter.)

And then the next excuse is the same experience happened to me tonight that happened once before from the same source. You know I love these fellows from the South, and I love that sweetness of soul which goes behind the oratory. I remember some three or four years ago when I was in Atlantic City attending the American Association convention, I had my daughter with me. She left me, going up to a prom at Harvard, so I wandered into the hotel all by myself and sat down and Dr. Witherspoon was there and he said, "Jackson, are you by yourself?" I said, "Yes." He said, "Come over and sit with us." So I went over and sat with than trinity, Witherspoon, McMurtry, of Louisville, and C. A. L. Reed, of Cincinnati, and we sat and enjoyed a pleasant evening. Incidentally, we used to have an old chuck-mutt club, and they were old chuck-mutts. I remember when I was initiated. The requirements were, first you had to kiss the picture of a beautiful woman (some-

thing that doesn't come hard for me—though I prefer the original); and second we had to sing a song, or dance a jig and tell a story. Those were the three fundamental tenets.

Well, they entertained me at dinner. It was Thursday night, the night of the President's address and I wanted to hear the address. We lingered long over our repast and it was getting late. We said we would go upstairs just for a minute, to get something. Well, the long and short of it was, we got up there and sat around on the beds and chairs talking and telling stories and nobody ever got within sight or hearing of the President's address. So this man can make me forget again. He made me forget my originally contemplated address tonight. However, I haven't any intention of inflicting upon you an address. You must remember that I am a little chick just out of the shell. By the time another year has passed around I shall have grown feathers and attained wisdom and I shall expect to appear before this and other societies. At the present time I have no such intention.

But there is something I do wish to do, and that is the real purpose of my appearing here tonight, to tender my very great thanks to you men for the support and friendship back of me which made the honor I hold possible, and I want here in particular to pay my tribute of appreciation and respect to the great profession of medicine of the city of St. Louis. I think it rather extraordinary that a large city with so many men of distinction and ability, would be willing to look to some smaller city in the same state and pick from that community its representative, and yet my name was first injected into the discussion of the presidency of the American Medical Association by St. Louis men, and through the several years which have intervened when my name was first discussed up to the present time, these St. Louis men have unanimously and loyally stuck to me. And so I want to render this tribute of appreciation that loyalty and generosity of support given to me by the major city of the state of Missouri, St. Louis.

St. Louis, somehow or other, seems to have been a sort of lucky place for me, as one of the first honors I had in medicine of a major character, at least in presidential timber, I was elected president of the Missouri State Medical Association in session in St. Louis, presided as president of the Western Surgical Society at its meeting in St. Louis. Now in the city of St. Louis I have the first privilege of greeting my friends as the president of the American Medical Association, and Gentlemen, I will say to you that had it been necessary for me to be elected president of the American Medical Association by any type of dishonesty, any type of political trickery, I shouldn't have felt that I were representing Missouri in the proper way under that condition, and it is a great pleasure to me that I am able to bring it back to the West with a clean hand and record on the part of your representatives of Missouri, and the fact that this came to us in a unanimous way is a matter of great gratification. I accepted it not because of any achievement of mine in this world, but as a tribute to the deserts of this great state of which I am an humble member and I, therefore, render my thanks to these, my friends, to St. Louis. And I also want at this time to express my very great appreciation for the loyalty of my home town. One of the most delightful things in this whole business has been in my home town not a single boy or man, as far as I know, but what have been my friend. And after all, Gentlemen, sometime in life comes a period when every one of us has to choose for himself what his ideal of life may be. We make up our mind sometime in this life of ours what we expect to accomplish and I want to say this, after having lived a fairly successful life I have come to the conclusion that there is one thing in this world that is absolutely worth while and that is the respect and the friendship of your fellowman who knows you. (Applause.) The greatest source of gratification to me is the fact that my comrades, my doctor friends, have been so unanimously loyal to me in their support. (Applause.)

The President introduced Dr. F. Park Lewis, Buffalo, New York, who delivered an address on "Achievements in the Prevention of Blindness."

Thursday, May 20, 1926—Morning Session

The sixth scientific session held on the morning of Thursday, May 20, 1926, was occupied with clinics and demonstrations at the Departments of Internal Medicine and Surgery of the St. Louis University School of Medicine and in the various hospitals under the control of the university and at the medical school.

Thursday, May 20, 1926—Afternoon Session

The seventh scientific session was called to order by the President, Dr. E. P. North, in the Auditorium of the St. Louis University, May 20, 1926, at 1:30 p. m.

Dr. John A. Witherspoon, Nashville, Tennessee, conducted a clinic on Duodenal and Gastric Ulcer.

Dr. T. W. Cotton, Van Buren, took the chair.

The following papers were read in the Symposium on Nephritis:

"Classification and Functional Capacity in Chronic Nephritis," by Dr. R. A. Kinsella, St. Louis.

"Blood Changes in Chronic Nephritis," by Dr. W. A. Myers, Kansas City.

"Cardiovascular Complications in Chronic Nephritis," by Dr. John L. Tierney, St. Louis.

The discussion on these papers was opened by Dr. Walter Fischel, St. Louis.

Dr. North resumed the chair and introduced the newly elected President of the Association, Dr. W. H. Breuer, St. James.

DR. BREUER: I will just ask Dr. North to continue presiding during the remainder of this session as he is familiar with the program.

Dr. North requested Dr. Cotton to take the chair.

Dr. Cotton announced that the next paper on the program was "Concentrated Feeding in Infancy," by Dr. Hugh L. Dwyer, Kansas City. Dr. Dwyer read the paper which was discussed by Dr. A. F. Bugg, Ellington.

Dr. F. C. Helwig, Kansas City, read a paper entitled "Action of Tobacco and Other Tar Extracts Upon Epithelial Cells."

There being on discussion on this paper, the Chairman announced that the program had been completed and there being no business before the meeting, the Association would adjourn sine die.

EIGHTEENTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

St. Louis, May 19, 1926

The County Society Secretaries held an interesting meeting and banquet on the second day of the State meeting, Wednesday, May 19, at 6 p. m. in the Lounge of the Melbourne Hotel.

Covers were laid for 40 and the banquet fully came up to the expectations of all present. In the absence of Dr. Geo. H. Thiele, the vice president, Dr. Austin McMichael, presided.

The speakers of the occasion were: Dr. John A. Witherspoon, of Nashville, Tenn.; Attorney General J. Henry Caruthers; the President, Dr. E. P. North; President-elect, Dr. William H. Breuer; Secretary Dr. E. J. Goodwin and Dr. Ross Hopkins, of the State Board of Health.

Many suggestions were made that if carried out in component societies would be very helpful. Dr. Witherspoon in his remarks said that, "every doctor should attend church. He should spend at least two or three hours each week with the best people of his community." This slogan holds good in medical circles. Every doctor should take a few days off each year to spend with the best doctors in their counties, for you will always find them at the county medical society meetings and state meetings.

It has been the opinion of some members for a number of years that the county medical secretaries should in some way be very closely allied with the House of Delegates, for if there is any one in a county that is in touch with the needs of his society, it is the secretary.

The following officers were elected for the ensuing year:

President, Dr. Austin McMichael, Rockport.

Vice President, Dr. E. A. Oliver, Richland.

Secretary, Dr. J. T. Hornback, Nevada.

J. T. HORNBACK, Secretary.

REPORT OF THE TREASURER

General Fund

Receipts

Balance on hand May 2, 1925	\$ 4,906.47
Advertising	6,952.33
Rent	585.00
County Dues	22,819.00
Interest on Balance	107.10

\$35,369.90

Disbursements

Vouchers Paid	\$24,830.12
Balance May 15, 1926	10,539.78

\$35,369.90

Legislative Fund

Receipts

Balance on hand May 2, 1925	\$ 1,554.54
Transferred from General Fund	3,218.59
Interest on Balance	72.00

\$ 4,845.13

Disbursements

Vouchers Paid	\$ 210.40
Balance May 15, 1926	4,634.73

\$ 4,845.13

Defense Fund

Receipts

Balance on hand May 2, 1925	\$ 1,092.27
Interest on Balance	29.00

\$ 1,121.27

Disbursements

Vouchers Paid	\$ 200.00
Balance May 15, 1926	921.27

\$ 1,121.27

Sinking Fund

Receipts

Balance on hand May 2, 1925	\$ 640.57
Interest on Balance	18.00

\$ 658.57

Balance May 15, 1926	\$ 658.57
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Recapitulation

General Fund	\$10,539.78
Legislative Fund	4,634.73
Defense Fund	921.27
Sinking Fund	658.57

\$16,754.35

G. W. HAWKINS, Treasurer.

Salisbury, Mo., May 15, 1926.

This is to certify that there is on deposit in The Traders Bank, of Salisbury, Mo., to the credit of Dr. G. W. Hawkins, Treasurer of the Missouri State Medical Association, at the close of business on May 15, 1926, sixteen thousand seven hundred fifty four and 35/100 dollars in the following funds:

General Fund	\$10,539.78
Legislative Fund	4,634.73
Defense Fund	921.27
Sinking Fund	658.57

\$16,754.35

(Signed) W. E. SUTTER, President

Report of Auditing Committee

We, your auditing committee, have checked vouchers and cash book and find both correct.

May 19, 1926.

C. T. RYLAND, Chairman,
T. B. M. CRAIG,
W. L. ALLEE.

REPORT OF THE SECRETARY

The activities of the county societies during the past year have been gratifying. Meetings have been more frequent and reports to THE JOURNAL more regular. During the year the councilors with few exceptions have given better attention to the counties than in the preceding year. Many councilors have visited the counties, or when this was not feasible they have written letters to encourage active societies and to put new life into those societies that were faltering. The councilor is a most important officer because upon him falls the burden of stimulating the activities of each county society in his district during the interim between annual sessions.

The visits of our president to councilor districts have been productive of more real service than can easily be mentioned in a report. The Secretary, and on several occasions other members accompanied the president, and the councilor of the district was present in each instance. At each meeting addresses were made by the president, the councilor and others, not only to the component societies, but to groups of prominent laymen, members of the commercial clubs and other civic bodies, state senators and representatives, and superintendents of county and city schools. The result, I believe, is a warmer feeling of friendliness toward our Association in all our work from these influential citizens. Visits were made to the 9th, 10th, 11th, 12th, 16th, 24th, 26th, 28th and 29th councilor districts.

The increase in dues has not caused any decrease in membership. There are fewer delinquents, the number of new members has increased but the total membership is 41 less than was reported at the last annual session, due to dropping 109 delinquent for three years or more.

Election of Dr. Jackson, President-Elect of the American Medical Association

It is a pleasure to report that the highest honor possible of attainment in the organized medical profession has been conferred upon one of our members, namely: the election of Dr. Jabez N. Jackson, of Kansas City, as President-elect of the American Medical Association. His nomination was received with enthusiasm by the delegates of the American Medical Association. No other name was offered in opposition to him and he was elected unanimously by a rising vote.

Affiliate Fellows of the A. M. A.

Upon the instruction of the Executive Committee our delegates to the Dallas meeting of the A. M. A. proposed the names of two of our members for Affiliate Fellowship and they were elected to such membership. They are Dr. Tinsley Brown, Hamilton, Caldwell County, a former President of our Association and an honor member of his County Society, who has been a Fellow of the A. M. A. continuously for 40 years; and Dr. F. W. Wesseler, of St. Louis City, an honor member of the St. Louis Medical Society, who has been a Fellow for more than 50 years. Affiliate Fellows of the A. M. A. enjoy all the privileges of active Fellows of the A. M. A. except a subscription to THE JOURNAL of the A. M. A.

Uniform Constitution and By-Laws

The House of Delegates of the A. M. A. has recommended a uniform Constitution and By-laws for State Associations prepared by a special committee of the A. M. A. which has been submitted to us for our adoption.

After a year's study of the subject this model was prepared by delegates familiar with the procedures

in State Associations. It contains among other suggestions a method of budgeting the expenses of the Association and of auditing the accounts under the direction of the Council, the election of a President-elect and correlates related provisions more uniformly than exists in our present Constitution and By-laws. I would suggest that this model be referred to the Committee on Constitution and By-laws for a report at this or the next annual meeting.

Secretaries' Annual Dinner

To the Secretaries of the County Societies the Association owes an obligation not easily discharged. Upon the Secretaries rests the burden of keeping up the Society activities in each County, a task that is not always easy and pleasant, and I plead for them your earnest appreciation and effort. The annual dinner to the Secretaries will be given in the Melbourne Hotel, Wednesday night at six o'clock, and the Councilors and other officers of the Association are earnestly invited to attend.

Guests

We have as the guest of our Association, Dr. John A. Witherspoon, of Nashville, Tennessee, a former President of the A. M. A. and Professor of Clinical Medicine at the Vanderbilt University Medical School.

Status of Membership

Number of Members April 1, 1925.....	3,330
New Members	139
Reinstated	12
	3,481
Resigned	17
Transferred	9
Dropped	109
Deceased	56
Expelled	1
	192
Total April 1, 1926	3,289

Respectfully submitted,
E. J. GOODWIN, Secretary.

REPORT OF THE DEFENSE COMMITTEE

During the year the Defense Committee has been called upon to advise with members upon twelve new suits for malpractice against our members, this being two more than in the past year. Eight cases were settled, one dismissed by the court when the plaintiff failed to appear at trial; in three cases the verdicts were rendered in favor of the defendants; two were compromised out of court; one was dropped by the plaintiff; one was a threat which never developed into a suit.

The committee has learned of a number of cases through the Medical Protective Company, of Fort Wayne, whose office is in the State Association headquarters. These cases have not been reported for financial assistance but the committee has cooperated with the Medical Protective Company in the preparation of the cases. These are not included in our tabulation.

The committee has heard less complaint this year than formerly against physicians being responsible for the initiation of suits, but we wish to emphasize again the necessity of members being cautious about commenting adversely upon the treatment of cases that fall into their hands after having been attended by other members.

Status of Cases

Cases pending, May 6, 1925	19
New cases during year	12

Threat	1
Cases settled	8
Cases pending	24

Financial assistance by the Association has been given in two cases. The committee requests that an appropriation be made to the Defense Committee Fund as the balance is low.

As in former years the members have willingly cooperated with the committee in assisting in the defense of those who have been sued. This cooperation is highly appreciated.

CHAS. E. HYNDMAN, Chairman,
W. C. GAYLER,
H. UNTERBERG,
Defense Committee.

PROCEEDINGS OF THE KANSAS CITY ACADEMY OF MEDICINE

Meeting of January 8, 1926

PROGNOSIS IN CARDIOVASCULAR SYPHILIS.—By DR. PAUL F. STOOKEY.

The statistics relative to the prognosis in cardiovascular syphilis are extremely contradictory. Longcope states that the prognosis is bad, particularly in the hospital type of cases where it is the exception to find a case diagnosed as myocardial syphilis alive at the end of the five year period. Such a gloomy prognosis is the rule among many clinicians, but we are all familiar with the clinical manifestations of aneurysm in an individual who will lead a comparatively active life over a long period of years. Syphilitic invasion of the heart and great vessels is a progressive process, the rapidity with which the degenerative changes occur depending upon individual resistance to syphilis and specific treatment, the benefits of specific treatment being in direct ratio with the age of the syphilitic infection. In his experience those individuals whose treatment was begun with extreme caution and whose subjective sensations received the utmost consideration offered the best ultimate prognosis and responded in a superior manner to syphilitic medication. Subjective improvement following minute doses of mercury and potassium iodide over a comparatively long period of time seems to indicate that such individual offers a comparatively good prognosis. He classified the response to treatment in three groups: (1) Those definitely made worse whose symptoms are augmented by treatment. If treatment is administered with extreme caution this group becomes very small. (2) This group comprises at least sixty per cent of the cardiovascular syphilitics, and will show considerable subjective improvement particularly in the pain sense. The prognosis is much better as to the span of life. (3) Individuals in this group respond to specific medication with brilliant therapeutic results. It is a comparatively small group. Of course there is no organic improvement in this group, but the subjective improvement is remarkable and the relief from the cardiac pain is complete. The greatest single prognostic element in any case of cardiovascular syphilis is the improvement of the subjective symptoms of the pain subsequent to the institution of treatment.

CONCLUSIONS

The prognosis is so intimately associated with the individual response to specific medication that it can only be formulated after long continued administration of specific medication. He has obtained best

results from small doses of mercury and potassium iodide administered over a long period of time.

DISCUSSION

DR. W. K. TRIMBLE: I was rather anxious that Dr. Stookey would say something about the pathology of aneurysms as related to prognosis, but it is evident that he wishes to warn us about the use of arsenicals in these cases only. This is possibly well taken.

I have always felt that the character of the lesion and the occupation of the patient in any given case has more to do with prognosis than the particular drug used. Aneurysms are far more frequent in the laboring classes, those doing heavy manual labor, and in these far more frequently progress to destructive symptoms in the male than in the female. Healed aneurysms are more commonly found post-mortem in women than in men.

I have not encountered the results pictured by Dr. Stookey though salvarsan preparations have always been used with caution. I remember one case that came to the Bell Memorial Hospital clinic in 1916 with a large aortic aneurysm, with most distressing symptoms and with erosion of the costal cartilages. Moderate doses of neosalvarsan were given in this case after a course of mixed treatment with marked relief from symptoms. This patient died of his aneurysm in 1923.

Specific therapy judiciously used assists in prolonging life in these cases but of far more importance is the location of the lesion, the occupation of the patient and general state of good health.

DR. G. E. KNAPPENBERGER: I would like to discuss the prognosis of syphilis more from the standpoint of pathology than from the purely clinical side. If we approach the question of cardiovascular syphilis from the standpoint of pathology we can roughly divide the lesions into about three classes: first, the class which involves the aorta at the valve commissures producing shortening of the valves with resulting regurgitation; second, the class which involves the aorta just above this, with stenosis of the coronary vessels; third, the class of cases which involve the aorta higher up.

In the first group regurgitation is produced with added strain on the left heart. These are the cases in which we have a large ventricle. The prognosis is bad.

The next is the type of cases with the involvement just above the valves and may produce a stenosis of the openings of the coronary arteries. This group shows serious cardiac embarrassment with vaginal pains.

The third group comprises the typical aneurysms. In this group our greatest fear is rupture of the aneurysm, but the patient who takes reasonable care of himself may escape that for a long time.

The differential diagnosis can often be made with the orthodiagram.

DR. STOOKEY (closing): A point I would particularly like to mention is that in my experience whenever special medication is administered, either mercury or salvarsan, there is some biochemical action. This may produce a reaction in individuals who are just able to sustain life, and the abrupt change may be productive of disaster.

ADULT TUBERCULOSIS OF THE SPINE.—By DR. C. B. FRANCISCO.

It was pointed out that this is a comparatively rare condition and that it is often overlooked until deformity develops; that the process is always secondary to some other lesion in the body and that when two active lesions can be demonstrated the

prognosis is not good. In fact the prognosis is unfavorable in any case of tuberculosis developing in the spine and attention was called to the fact that the government rated most of the cases in the service man as being totally and permanently disabled.

In reviewing the 25 cases that formed the basis of the paper it was known that five had died. Seven had Albee bone graft operations. Most of the cases are still wearing their spinal supports. None of them had returned to full duty and most of the cases are in bad general condition. At the present time only three or four are in apparently good general condition.

The conclusion is that on the whole the prognosis in adult tuberculosis is rather discouraging.

DISCUSSION

DR. FRANK D. DICKSON: I understand that Dr. Francisco believes that a support should be worn on a tuberculous spine, even after operation, for two years or more. I do not believe that such prolonged after treatment by brace is necessary, and I rarely keep a support on an operative tuberculous spine longer than six months.

In adults, one has to be particularly careful about making a diagnosis of tuberculosis of the spine. Other destructive conditions can give an appearance by X-ray and symptomatology which very closely resembles tuberculosis of the spine. It happens that in the past four months I have seen five patients with typical X-ray and history of Pott's disease who have also given very positive Wassermann reactions. It is difficult to determine under such conditions whether one is dealing with a tuberculous or syphilitic condition.

One must also remember that malignancies of the spine, particularly sarcoma, are very difficult to differentiate from tuberculous conditions. In the past year I have had one very instructive case, which had been diagnosed Pott's disease. I concurred in the diagnosis but felt that the case should not have a spinal stabilization done. The patient was put on a plaster bed with immediate relief of symptoms which lasted about two months. At the end of this time, in spite of fixation, pain returned and a few weeks later a total paralysis from the waist down occurred. The recurrence of pain and the onset of paralysis are very significant indications as this practically never occurs with a tuberculous spinal involvement. Shortly thereafter we were able to make a definite diagnosis of sarcoma involving the lumbar spine which was later confirmed by autopsy.

By these remarks I merely wish to emphasize the necessity of the most careful study in any adult case in which a spinal lesion of destructive character is present and to indicate that there are other conditions than tuberculosis which must be eliminated before the diagnosis can be definitely made.

DR. T. G. ORR: It is really amazing how far advanced these cases of lumbar spine tuberculosis may become before they ask for treatment. I remember two cases that came into the University of Kansas clinic with large lumbar abscesses, who had not been to a doctor before these abscesses appeared. One patient was sent to me who had a swelling in the left inguinal region and the local doctor had fitted him with a truss. I found tuberculosis of the lumbar spine. The subject is very troublesome to me from the standpoints of both diagnosis and prognosis. I think these conditions are very interesting and the presentation tonight is a very definite warning that we should be on the lookout for disease involving especially the lower spine.

DR. A. L. SKOOG: This topic interests the neurologists greatly. It happens quite frequently that we have cases of weakness of the lower extremities where we can make positive diagnosis of tubercu-

losis in the spinal cord if we are careful enough. They are frequently overlooked.

At Bell Memorial Hospital a student from Manhattan Agricultural College stated that his history started about the latter part of March or April, 1925. He had consulted a member of one of the cults, who, instead of applying the usual spinal column quack treatment, told him that "it did not amount to anything," and he went along until he developed a complete paraplegia. He then came under my observation. It was very evident that the disease was in the mid-dorsal portion of the spinal cord. He had become extremely spastic and was unable to use his lower extremities.

I think that it is very important to treat these cases early. Dr. Francisco suggested this but possibly might have emphasized it more.

DR. SAM SNIDER: There is a means of diagnosis of considerable value in differentiating tuberculous spine from other lesions, and that is the thermometer. A man with an active tuberculous spine who moves about usually has an occasional slight elevation of temperature.

A positive Wassermann can not be used as proof of pulmonary syphilis. I have seen that illustrated in several cases of pulmonary disease during the last year. Many cases diagnosed as pulmonary syphilis later have tubercle bacilli in the sputum.

I saw a patient in 1915 who had been treated six months for tuberculosis of the spine by fixation without any improvement. We found a 4 plus Wassermann and all of his symptoms cleared up quickly with antisyphilitic treatment. That is the only case I have seen that was syphilis of the spine or could feel confident that it was.

Dr. Francisco referred to a girl who had been treated in a sanitarium for pulmonary tuberculosis and the physician failed to discover tuberculosis of the spine. She had a kyphosis at the level of the first lumbar vertebra, but the X-ray showed the disease to be in the fourth or fifth lumbar vertebra.

DR. B. L. MYERS: In 1921 a young man about 30 years of age consulted us regarding a herniotomy. In a routine examination we found a large prevertebral mass which was shown in the dorsal region by the X-ray plate. The young man had no fever and was working regularly in a garage as a machinist. Dr. Robert Schaeffer saw the patient with us, and it was the common opinion that the shadow was that of a healed tuberculous abscess, which had followed an injury and illness several years previously of which he gave a history. In the absence of active symptoms the herniotomy was done and the patient's recovery was unmarked by any symptoms suggestive of his spinal trouble. He returned to his employment and attended his usual duties for some while. One day, feeling tired in his back he sought a chiropractor's care, who gave him an "adjustment" following which his back became painful, he ran a fever, and for many months he required a body brace for his spine, which was fitted by the orthopedist. This case reminds us of Hibb's contention that there may be doubt as to whether these lesions are ever free from viable tubercle bacilli.

I was interested to note in the last work of Ochser, that Putti has aspirated several prevertebral abscesses by passing a needle just over the margin of the rib, and in front of the vertebral body. It is stated that no accidents have happened in this procedure in Putti's clinic.

I became interested in the next case, at St. Mary's Hospital, on attending the autopsy on a woman 68 years of age, whose history stated that she had suffered from a painful spine for one month. The X-ray pictures show that one vertebra was badly destroyed. Autopsy revealed an abscess containing an unusual amount of pus. The marked destruction

of the vertebra and the rapid development of the lesion suggest malignancy, but the large abscess demonstrated at autopsy, with the gross and microscopic demonstration of tubercles in lungs, liver, kidney, spleen and peritoneum, leave little question of a tuberculous lesion. Such a process in a patient 68 years of age is worthy of note.

DR. FRANCISCO (closing): I might say in conclusion that we have been able to prove all of these cases to be of tuberculous origin.

In connection with Dr. Dickson's discussion it is interesting to note that out of twenty-five cases there were six that had positive Wassermanns. All of the six had tuberculous spines in a typical form. Among 1000 back cases at the hospital and out-patient department we have never had a case of leptic spine so far. This is unusual of course. During this same period in private practice I saw three Charcot spines.

I do not know of any condition where one has to be more careful to avoid pitfalls and mistakes than in the diagnosis of tuberculosis of the spine in adults.

In regard to fixation, I think that the younger group of men and women are liable to get careless. This is true of service men. If one can get them to wear a support it might save them. I try to keep the fact before the patient that he has had tuberculosis. I think this is the secret of ultimate success.

Meeting of January 22, 1926

NEUROLOGICAL ASPECT OF PERNICIOUS ANEMIA.—By DR. A. L. SKOOG.

DISCUSSION

DR. FRANK I. RIDGE: I can theorize almost as well as Dr. Skoog. About five years ago the medical director of a large insurance company called my attention to the fact that since the advent of cholecystectomy the incidence of pernicious anemia in this country had increased over sixty per cent. When we come to the consideration of the etiological factors, the generation of toxins in the lower intestinal tract play an important role. The work of Dr. Wahl showing the effect of cholesterol on the fragility of the blood cells calls attention to another possible etiological factor.

The degenerative processes of the nervous system are of great interest. They come and they go, they become more severe and then improve. There are comparatively few cases in which they become a predominant factor until the final stages of the disease. In the early stages the recognition of them may suggest the diagnosis. So far as treatment with Fowler's solution is concerned, I have always paid more attention to hydrochloric acid than to Fowler's solution. In my experience the acid offers only temporary improvement.

DR. A. C. GRIFFITH: I do not agree with Dr. Skoog's theory. I am really at a loss to advance any theory. I do not believe anybody knows the cause of pernicious anemia.

DR. SKOOG (closing): The theory that I have advanced for pernicious anemia takes into account both the cause of pernicious anemia and the explanation of the process taking place. There are not a great many facts in the physiological field which we could utilize. I think anyone will admit in studying pernicious anemia that we usually consider the late stages and the pathology belonging to this period. I appreciate that there are plenty of opportunities for working on the toxic theory, but the toxic stage I feel, too, is a late one. I am fully in accord with the report that ninety per cent. of the patients suffering from pernicious anemia show

changes in the nervous system. They may be first functional and then become organic.

TRANSFUSION IN THE TREATMENT OF ANEMIA.—By DR. W. W. DUKE.

DISCUSSION

DR. D. D. STOFER: In the present day, transfusions are being used more widely, first, because it is found that secondary anemias of all types whether due to an acute hemorrhage or due to some other condition, respond immediately to a blood transfusion; second, because safer methods of grouping and cross agglutination have been devised and the source of error in grouping or cross agglutination has been eliminated, thereby reducing reactions obtained as well as preventing death.

There is some question concerning the use of the direct or indirect method and very favorable results have been reported by users of both. However, in Dr. Duke's series of cases and in my series of cases, reactions have practically been eliminated by using the direct method, and such cannot be said of the indirect method or citrate method. It is quite true that the citrate method can be used more conveniently, but there is very little difference if one takes time to train an assistant who can be used in doing the direct method. One can readily see that whole blood when properly matched, with the time element eliminated of injecting the blood immediately upon its removal so that no platelet degeneration takes place, is far superior to using blood which has been mixed with a citrate solution and unquestionably changed to a certain degree.

In McLester's recent article he speaks quite favorably of the citrate method and in his experience has had but very few reactions. He seems to think that the citrate solution has nothing to do with the reaction. I do not feel that anyone is absolutely sure about the citrate being the cause of a reaction, but my reasoning tells me that whole blood, which is not changed in any way, other than being out of the body from six to twelve seconds, should be better than blood which has been out of the body for a longer period of time and has been mixed with a foreign substance. It occurs to me that chills sometimes follow the intravenous use of salt solution or glucose, and I do not see why citrate would not be the cause of a reaction similar to this.

I have used transfusions in the following cases and have had very gratifying results, namely, intestinal hemorrhages in typhoid fever, hemorrhage following tonsillectomy, in gastric hemorrhages from an ulcer, and in other types of secondary anemia which have septic conditions or the gradual loss of blood due to chronic infections as their cause. It is very remarkable how a blood volume can be built up by giving whole blood, whereas the usual time for building up after a severe hemorrhage or after one has become anemic takes from two weeks to months by the usual method of iron and arsenic medication. The time element plays an important part and when a thing can be accomplished almost immediately that will ordinarily take weeks or months to accomplish, I can see no reason why the method should not be one of choice.

Results in pernicious anemia are satisfactory to a certain degree but not nearly so satisfactory as in secondary anemia. Certain types of pernicious anemia have remissions of their own accord and get along for years without anything being done outside the method of giving them acid by mouth, arsenic and iron in the usual manner. Other types do not seem to have remissions as easily and these are greatly benefited by giving them transfusions. The

third type in which atrophy is quite marked and nervous lesions are present does not respond in a satisfactory manner when transfusion is used.

Blood grouping affords us an easy method of keeping track of the donors. However, it is found at times that people of the same group or of a universal group agglutinate markedly, consequently it is unsafe to depend upon grouping entirely in matching donors. A check should always be made by cross agglutination and this possible source of error can easily be eliminated by so doing. The time that it takes to do this simple little procedure of cross agglutination is nil as compared to the trouble that one can make for himself by using a mismatched blood. I also think it is a very wise procedure for the one who is doing the transfusion to check his blood himself to be sure that no agglutination is present.

Meeting of February 5, 1926

SOME RECENT WORK ON INSULIN.—

By DR. J. J. R. MACLEOD.

An account was given of observations on depancreatized animals that had been kept alive for several months—two of them for over 2 years—by treatment with insulin. It was pointed out that it was necessary to feed these animals with raw pancreas, since otherwise intestinal digestion did not proceed along normal lines and led to the production of toxic substances (amines) which, being absorbed into the portal vein, poisoned the liver. The evidence that this occurred was intense fatty change, leading to complete breakdown of the hepatic function (jaundice, rise of temperature, etc.) and death. Without raw pancreas in the food, not more than 50 per cent. of the ingested protein was absorbed and much undigested meat fibre could be recognized microscopically in the feces.

In animals treated with insulin and raw pancreas the sugar balance has not become changed during the two years of the observation, indicating that there can be no assumption of the insulin-producing function by other parts of the body. It was pointed out that the claims of certain investigators that pancreatic tissue might become developed around the duct of the pancreas in the duodenal wall could not be confirmed, since nodules of this tissue were observed as frequently in the duodenum of normal animals as of those that had been depancreatized and treated with insulin for several months; moreover, these nodules have never been found to contain any islets.

One of the animals went through a normal pregnancy without any change in the carbohydrate balance, which would seem to indicate that the embryo cannot, as has been supposed, secrete any significant quantity of insulin into the maternal organism. The day after the pups were born and were suckling the mother, however, serious symptoms of hypoglycemia supervened, nothing in the diet or the insulin dosage having meanwhile been altered, and the blood sugar was found near the convulsive level. It was clear that the hypoglycemia was caused by the loss of sugar through the milk secretion. There is no doubt that this is the cause of milk fever in cattle and the treatment adopted for this condition (blowing up the udder with air) acts by stopping the secretion of the mammary cells. Investigations in this connection have been made on milch cows by Widmark and Carlens of Lund.

An account was also given of the condition produced when insulin was discontinued in depancreatized animals; diabetic symptoms very quickly supervened, being particularly severe in animals with much body fat. Indeed, such animals could survive only 4 days on withdrawals of insulin when

they died following symptoms like those of diabetic coma, with very high percentage of ketone bodies in the blood and extremely high blood sugar. It was pointed out that marked hyperglycemia and ketonemia in the fat animals, as compared with the thin ones, would give support to the view that sugar is produced in the diabetic organism from fat by way of the ketone bodies. The D/N ratio of the animals after discontinuing insulin was seldom at the Minkowski level of 2.8. It was usually much higher for the first day or so after discontinuing the insulin and then steadily fell until the death of the animal. Not only this, but it was found in one animal in which the insulin was left off on three different occasions, that the D/N ratio was not the same, being much higher when the animal was fat than when it was thin. These facts do not support the commonly accepted view that a fixed percentage of sugar is produced in diabetes from protein.

The second part of the communication dealt with the evidence that insulin is derived exclusively from the Islets of Langerhans. In this connection the comparative anatomy of the islet tissue of various fishes was reviewed for the purpose of showing that the so called "principal islets" of the bony fishes are strictly homologous with the Islets of Langerhans of the mammal. Extracts prepared from these "principal islets" were highly potent in insulin, whereas extracts prepared from the pancreatic tissue of these fish, which contained no islets or only small traces of them, contained no insulin. Since this evidence had not been considered by some investigators to be adequate to support the insular hypothesis, a further experiment was done of excising these islets in the sculpin, a fish in which this operation can readily be performed without injuring the pancreas itself. The result of this "isletectomy" was that the blood sugar of the fish rose to 10 times its normal value and remained high for as long as the fish could be kept alive, which in one instance was 21 days. Finally it was pointed out that the insulin which it was claimed could be extracted from the tissues of diabetic animals can not be insulin in the accepted sense; that this is a hormone which prevents the symptoms of diabetes, since otherwise insulin treated, depancreatized animals would not show symptoms of acute diabetes when insulin treatment was discontinued. Taking the evidence as a whole it is therefore quite clear that the only source of insulin in the animal body is the Islets of Langerhans.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY.

One Hundred and Twenty-first Meeting, May 10, 1926

1. SOME OBSERVATIONS ON FAT EMBOLISM.—By DR. E. P. LEHMAN AND MR. R. M. MOORE.

A general discussion of the unexplained elements in our conception of fat embolism was followed by the report of an experimental study of this condition. Test tube experiments demonstrated the breaking down of artificial emulsions by (1) fat solvents, (2) soap precipitants, (3) acids and alkalis, (4) products of protein decomposition. Attempts to carry these results over into the living dog were rewarded by the experimental production of fat embolism of non-traumatic origin. This was accomplished by ether administration in lipemic animals; the emboli occur presumably from the breaking down of the plasma emulsion of fed fat. The formation of emboli from this emulsion has never

been investigated and has, in fact, been denied without evidence. The fundamental importance of this demonstration in relation to the possible occurrence of fat embolism following other chemical changes in the blood, the result of disease or of treatment (intravenous medication, anesthesia, etc.), was emphasized.

2. A STUDY OF THE TOTAL CHLORIDES IN STOMACH CONTENTS.—

By DR. F. D. GORHAM, MR. C. M. STROUD AND MR. M. M. HUFFMAN.

Bolton and Goodheart, Baird and Campbell, of London, have suggested that the total chlorides of a sample of stomach contents as determined by the direct Volhard method, after filtration but without ashing, is more accurate than the acidity as an index to the amount of gastric secretion, because much or little of the acid may have been neutralized. They further state that a comparison of the acidity, as determined by the Toepfer method, and the total chlorides gives information as to the amount of neutralization that has occurred. However, this depends upon the hypothesis that the chief source of chlorides in the stomach is hydrochloric acid, an assumption of fundamental importance worthy of investigation.

The emptying rate of the stomach for fluids is variable in different subjects and in the same individual under different conditions. When 400 cc. of fluid is given as part of a test meal, it may act as a diluent of the gastric juice for more than two hours, and be an important factor in determining "the height of acidity" at any phase during that period. Most physiologists agree that very little if any water is absorbed in the stomach. This is also apparently true of certain dyes, as phenolsulphonephthalein. If this be a fact and we give as the fluid of the test meal a fixed quantity of water containing phenolsulphonephthalein of definite concentration, then the percentage of dye concentration in a sample of stomach contents at a given period after ingestion of the meal may be interpreted to approximate the dilution of the gastric juice in the sample by the fluid taken with the test meal. There is no apparent reason why the relationship of the dye and water as originally taken will be changed in the stomach except by dilution due to gastric secretion, regurgitated duodenal contents, etc.

We made a study of over one hundred human subjects, normal and abnormal, in the following manner: The fasting contents were obtained by means of an Einhorn-Rehfuß type of tube in the morning after a night's fast. A comparative study was made of the free acid, total acidity and total chlorides of the fasting contents. The subjects were then given one or two test meals, (a) a shredded wheat biscuit and exactly 400 cc. of tap water containing 6 mgs. of phenolsulphonephthalein; or (b) 400 cc. of distilled water containing 6 mgs. of phenolsulphonephthalein. At different periods after the test meal the stomach was emptied as completely as possible and a comparative study made of the phenolsulphonephthalein concentration, the free hydrochloric acid, total acidity and total chlorides in a sample of the mixed contents.

By "corrected acidity" and "corrected chlorides" is meant the acid and chloride concentration in a sample of gastric contents after the removal of the factor of test meal dilution. To make comparison easy the chlorides reckoned as sodium chloride are expressed as 10th normal hydrochloric acid.¹ In

these experiments it was not assumed that all the chlorides found in the gastric contents were actually derived from hydrochloric acid.

CONCLUSIONS

1. In most individuals 400 cc. of distilled water containing 6 mgs. of phenolsulphonephthalein provokes a gastric acidity almost equal to that of the Dock test meal. Having shown that this amount of fluid may act as a diluent of gastric secretion, during the period of examination, the importance of determining this dilution in estimating gastric function by means of a liquid test meal is apparent.

2. The total chloride concentration of the fasting contents and of the chyme at different periods after the test meal frequently approaches a level. Such level in normal cases shows a similarity to the chloride concentration of blood plasma.

3. The relationship of the acidity and total chlorides in gastric contents is exceedingly variable, both in health and disease.

4. In achylia gastrica a constancy of the chloride concentration in gastric contents is also noted, the level however being usually lower than normal.

5. The chloride concentration of bile is higher than has been reported by many investigators.

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DISCUSSION

DR. GORHAM: This is part of a study which was begun two years ago by R. B. Campbell, now of Ford Hospital, and J. Levy. The original problem was a study of the factors in gastric acidity.

The so-called "acidity" or "secretory" curves as determined by the fractional method of gastric analysis and variable acid concentrations as obtained by the single aspiration procedure are frequently interpreted only in the light of variations in gastric secretion. In the normal human subject the acidity of a sample of stomach contents obtained by means of the tube after a fasting period or at a given phase of digestion after a test meal, is the resultant of several factors, chief of which are: 1. Hydrochloric acid concentration and rate of secretion of the gastric juice. 2. Neutralization. 3. Motility or emptying rate of the particular stomach for its fluid contents. 4. Dilution. 5. Location within the stomach from whence the sample was obtained.

It is of both academic and clinical interest to investigate the above factors individually and to study their various relationships in health and disease.

X-ray studies show that foods in liquid state, depending somewhat upon their composition, may begin almost immediately to enter the duodenum and continue progressively until the stomach is empty. The emptying rate of the human stomach even for liquids is not only variable in different individuals but may vary under different conditions in the same individual. It cannot be accepted that the chyme at a given phase of digestion after a test meal will always be a homogeneous mixture, as samples of contents taken simultaneously from different stomach levels may differ widely in character and acidity.

It was observed that the total chloride concentration of the fasting contents and of the chyme, at different periods after a test meal, frequently approached the same level.

In achylia gastrica the total chloride concentration of the fasting contents and of the gastric chyme after a test meal was usually low, but in some in-

¹ 1 gm. of sodium chloride is capable of producing approximately 17.1 cc. of 10th normal hydrochloric acid or vice versa.

stances similar to that found in apparently normal subjects. In achylia gastrica the response of the chlorides after hystamine, without corresponding appearance of free hydrochloric acid, was especially noteworthy and raised the question as to whether or not the total chlorides of the stomach contents are necessarily an index to hydrochloric acid production by the gastric glands.

In conclusion, I would emphasize that in the examination of the stomach contents a comparative study of the acidity, total chlorides, motility and if possible total bases may give us information of academic if not of clinical importance.

3. THERMAL DEATH POINTS OF TUMOR CELLS.—By DR. W. E. SHAHAN.

If a mass of living tissues is exposed to successively higher temperatures for measured lengths of time there will certainly be a temperature reached which will destroy the life of every cell within the mass. Will every cell within the mass be destroyed at the same temperature, or will some kinds of cells be destroyed at one temperature, other kinds at another temperature and others at still another temperature? During the past ten years a considerable amount of clinical and experimental work has been done on this question. A piece of apparatus termed a "thermophore" has been developed and introduced to the medical profession. The thermophore permits us to introduce measured quantities of heat into given areas of tissue for measured lengths of time and has enabled us to establish that different kinds of cells have widely different thermal death points. It has put what may be termed the science of selective thermotherapy on a basis of practical clinical utility. By means of it we have shown that the thermal death points of epitheliomata, papillomata, mixed celled sarcomata and nevus cells are just below 140° F. (77.7° C.) applied for one minute, while the thermal death points of xanthomata and hemangiomata are somewhat higher, 145° F. (80.5° C.) applied for one minute. The thermal death points of normal tissues, such as the skin, conjunctiva, cornea and sclera, are far above these so that destructive doses of heat may be applied to these tumors without destroying normal tissues upon or among which they may be placed.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Braymer, June 10, in the afternoon in Masonic Hall. Present: Drs. G. S. Dowell, President; Tinsley Brown, Secretary; L. M. Daley, E. A. Thompson, H. H. Patterson, and B. F. Carr. Visitors, L. C. Woolsey, of Braymer, J. P. Henderson, of Kansas City. The visitors were accorded the privileges of the floor. The minutes of the meeting held at Breckenridge, March 12, were read and approved.

The application of Dr. O. C. Kilbourn, of Cowgill, for membership was presented and was referred to the censors for report and action at next meeting.

Dr. Henderson read and expounded a paper on the treatment of prostatic disease which was well received and discussed. Dr. Henderson reported operations on 96 cases with a mortality of only three. A vote of thanks was tendered Dr. Henderson for his presence and presentation of such an excellent paper.

The subject of discussion for the meeting was "Scarlet Fever." There has been quite an epidemic of this disease throughout the county lately. The discussion was in reference to prevention and immunization, including the Dick test. The discussion proved to be very interesting; it was concluded to be best to try out the different treatments and tests

for future consideration. The next meeting will be at Hamilton in July.

TINSLEY BROWN, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in the Red Cross rooms, at the county courthouse, at Clinton, May 6, with the following members present: G. S. Walker, J. R. Wallis, R. D. Haire, J. R. Hampton, F. M. Douglas, S. A. Poague, W. E. Baggerly, J. G. Beaty, Ed. C. Peelor, S. W. Woltzen, N. I. Stebbins and J. J. Russell; also Dr. James R. Elliott, of Kansas City, who had charge of the clinical part of the program.

Twenty-three orthopedic cases were examined and diagnosed. Treatment was recommended for each.

The Society voted to endorse physical training in high schools.

A communication from Councilor Guy Titsworth, suggesting that as St. Clair County is not organized it would be well "to see if we could not get the men who are active there to join" our society, was read and by a unanimous vote this plan was approved.

A vote of thanks was extended to Dr. Elliott for the excellent manner in which he had conducted the clinic and he was elected to honorary membership in our society. S. W. WOLTZEN, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society held its regular monthly meeting at the Riverview Club in Lexington, Tuesday afternoon, June 8. The meeting was called to order by the president, Dr. Lewis Carthrae, Jr. The minutes of the last meeting were read and approved. The following members were present, from Lafayette County: Doctors Martin, Odessa; Liston, Oak Grove; Payne, Lexington; Ryland, Lexington; Schooley, Odessa; Butler, Lexington; Koppenbrink, Higginsville; Chalkley, Lexington; Cope, Lexington; Carthrae, Jr., Corder; Edmund Lissack, Concordia. From Ray County: Doctors C. H. Reed, Hardin; M. Grimes, Hardin; C. B. Shotwell, Richmond; A. R. Remley, Richmond; E. T. McGaugh, Richmond; L. D. Green, Richmond; T. F. Cook, Richmond; A. E. Adkins, Richmond; G. W. Gaines, Rayville.

Dr. Carthrae opened the meeting with a short address of welcome.

Dr. Frank I. Ridge gave a very interesting talk on the subject "Arterial Hypertension, Etiology and Treatment."

Dr. Paul F. Stookey gave a well prepared and instructive talk on the diagnosis and treatment of "Cardiovascular Syphilis."

Dr. Walter A. German read an instructive and timely paper on the diagnosis and treatment of "Pulmonary Tuberculosis."

Dr. E. T. McGaugh gave a short talk on the subject "The Attitude of the State Board of Health towards the Osteopath and the Chiropractor."

The Auxiliary met in the afternoon and reported a good attendance. At six o'clock the ladies served a basket dinner. The ladies were to be congratulated and thanked for the fine dinner prepared and served.

The meeting adjourned at 10 o'clock.

LEWIS CARTHRAE, JR., M.D., President.
EDMUND LISSACK, M.D., Secretary.

Abstracts of Talks

Dr. Carthrae's welcome: Before taking up the scientific part of the meeting, I wish to thank our guests for their presence and wish to take this op-

portunity to assure them of our hearty welcome. It was suggested some time ago that we have our open meeting and it was the entire wish of our society that we would like to have our friends in the profession from Ray County visit with us. We only trust that your visits in the future will be frequent as they will be a stimulus to our society. I feel certain that your presence here this evening will prove to be an immense amount of pleasure as well as instructive. We wish also to thank our Jackson County friends for making the sacrifice for us. We feel indeed fortunate in securing them for our meeting.

Dr. McGaugh's talk: The doctors must cooperate more to prosecute these cults when occasions arise relative to law violation.

Dr. German's paper: Pulmonary tuberculosis is a disease with which the physician is constantly coming in contact in all lines of medical practice. Some facts to be considered in diagnosis are, (1) a clear conception of the morbid anatomy. Location of the lesion. (2) Proper appreciation of significance of symptoms and sufficient courage to act promptly. (3) Physical signs are very valuable, but their importance is greatly helped by association of symptoms and knowledge of pathological laws. (4) One or all laboratory aids should be employed.

Treatment: Any climate is suitable for treatment. The practice of sending tuberculous patients to a different climate when they are not financially able to live for more than 5 to 10 years without earning a living, is killing many hundreds of people yearly. Sunlight is highly recommended.

Dr. Stookey's talk: Biggest, single diagnostic aid—when a man over 40 who has never had any infectious disease develops organic heart disease, the possibility of syphilis is very great. In treatment the best results are obtained by judicious administration of mercury over a long period of time.

Dr. Ridge's talk: Arterial hypertension is a very prevalent condition. It is a symptom of some pathological condition and can not be considered a disease entity.

There are probably five million people in the United States showing this symptom. There is a distinct element of heredity which follows the mendelian law. Sixty-eight to seventy-six per cent. of these cases show the influence of consanguinity. Experimentation has demonstrated that prolonged hypertension in itself without toxic or glandular dysfunction will cause atheroma. Environment, mental strain and physical excesses are conducive to hypertension. Toxic influences from focal infections are contributory causes. Glandular dysfunction, whether due to physiological changes, or to diseases of toxic origin, are an etiological factor.

Any blood pressure above 160 millimeters systolic, and 100 diastolic, must be considered as hypertension. The prognosis is more dependent upon a diastolic pressure than upon the systolic. Rising diastolic pressure are an ill omen. Diastolic pressure above 110 gives a bad prognosis.

In treatment, it is essential to be guided by symptoms and an intimate knowledge of the patient's life. Diet sufficient for physical demands is essential. Many pressures reduced by strict dieting are only temporary and due to nutritional depletion. Support of cardiac muscle is essential. Diathermy may be of some benefit, as also may be the usage of liver extracts. The effects of hepatic extracts on arterial hypertension were called attention to. Quinidine produces a marked, sustained raise of blood pressure, the same as that obtained in arterial hypertension. We have studied hypertension and possibly the means of removing it by producing a substance capable of counteracting quinidine hypertension. Liver

extract is very helpful. Patients vary in their response, and the same patient will vary from time to time it has been observed. All focal infections should be removed. Endocrine syndromes should be studied, especially in the female. Albuminuria does not necessarily, when found in hypertension, mean that nephritis is the etiological factor in these cases.

EDMUND LISSACK, M.D., *Secretary*.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met in regular session in the Chamber of Commerce rooms, Tuesday, June 8, 1926 at 8:00 p. m. The meeting was called to order by the president, M. R. Noland. The minutes of the previous meeting were read and approved. There were 15 members present, as follows: J. Maddox, L. A. Bazan, G. O. Cuppaidge, L. E. Huber, T. S. Fleming, L. Hunker, C. H. Dixon, M. E. Leusley, L. O. Nickell, R. D. Streeter, S. T. Ragan, P. C. Davis, M. R. Noland, F. L. McCormick, of Moberly, and D. A. Barnhart, of Huntsville. In addition we had a visitor, Dr. Ficklin, of Toledo, Ohio.

Dr. G. O. Cuppaidge, our delegate, made an interesting report of the State Meeting.

The application of Dr. Dodson, which was presented at the May meeting was withdrawn by Dr. Dodson.

Dr. M. R. Noland read a very lengthy, interesting and well prepared paper on the heart, giving a general outline of most of the diseases of the heart. A general discussion followed in which every one seemed interested.

The next meeting will be held on July 13.

M. R. NOLAND, M.D., *President*,
F. L. McCORMICK, M.D., *Secretary*.

VERNON-CEDAR COUNTY MEDICAL SOCIETY

The Vernon-Cedar County Medical Society met at the courthouse in Nevada, June 10, at 2 o'clock p. m. The President, Dr. E. A. Dulin, called the meeting to order.

The Councilor, Dr. T. B. M. Craig, made a complete report of the proceedings of the State Meeting held in St. Louis.

Drs. George Clark Mosher and H. L. Dwyer, of Kansas City, and Dr. Laybourn, of Jefferson City, were the visiting essayists.

Doctor Mosher read an exhaustive research paper on the results of Cesarean section, also making a strong plea for maternal welfare.

Dr. Dwyer's lecture on "Infant Feeding" was full of new ideas and startling assertions. Doctor Dwyer has a message and presents it in a very excellent manner.

Dr. Laybourn came to us as a representative of the state board of health and told us something about diphtheria, scarlet fever, and rabies. He thinks that the regular quarantine of properly treated cases of diphtheria and scarlet fever is much too long.

The next on the program was a "Round Table" talk led by Dr. E. R. King, of Nevada, on "Infantile Paralysis." This seasonable subject was widely discussed and it was unanimously agreed that we were still without means of adequate treatment.

About 50 were present including the Nevada physicians and the Women's Auxiliary, Dr. A. G. Althem, of Sheldon, Dr. Sitton, of Jerico Springs, Dr. Liston, of Walker, Dr. Simrell, of Caplinger Mills.

The next meeting of the Society will be held in Eldorado Springs, July 15.

J. T. HORNBACK, M.D., *Secretary*.

BOOK REVIEWS

ARTIFICIAL SUNLIGHT AND ITS THERAPEUTIC USES.

By Francis Howard Humphris, M.D., F.R.C.P., Hon. Consulting X-Ray Physician to the American Hospital in London. Illustrated. Oxford University Press. American Branch, 35 W. 32nd St., New York City. Price \$2.75.

The author recognizes the difficulties which always confront medical men who are making research in therapeutic effects, such as that of artificial light, and that much of the existing literature on the subject is confused and formless, and that the subject of actinotherapy is in a state of evolution. He observes that the field of application is being so widened that one is amazed at the possibilities before it and he feels that its adoption by the profession at large is not in the dim and distant future.

The first chapter is a review of the history of light as a therapeutic agent from the earliest times to the present day, with a gradual development of a more scientific and practical recognition of its value by the process and standardization of an improved technique.

The second chapter is devoted to the characteristics of ether vibrations, explaining the extreme simplicity of the sources and working of ultraviolet radiation.

The third chapter illustrates and describes different types of apparatus, with a consideration of their advantages and uses. He considers both the mercury quartz lamp and the carbon arc.

The fourth chapter deals with the therapeutics of ultraviolet rays, beginning with Finsen's early work and following up with the developments of the newer apparatus and the clinical experiences of Rollier and other authorities. The author considers the effects upon the blood as applied to rickets and other diseases.

The fifth chapter is devoted to the various techniques for treatment, considering the methods of employing the different types of apparatus under different conditions.

The sixth chapter deals with the use of ultraviolet rays in skin diseases, illustrating the results in boils, carbuncles, alopecia, acute and chronic herpes zoster and other conditions.

In the seventh chapter the author illustrates the use of artificial sun rays in conditions of the nose, throat and mouth, in gynecology, genito-urinary affections, bronchial asthma, pulmonary and extrapulmonary tuberculosis, certain types of nervous disorders and forms of neuritis, rheumatism, fractures, and other conditions.

This work is a valuable addition to the literature on this subject.

G. L. G.

DISEASES OF THE SKIN. By Richard L. Sutton, M.D., LL.D., Sc.D., F.R.S. (Edin.). Professor of Diseases of the Skin, University of Kansas School of Medicine. Member of the American Dermatological Association, etc. With 1147 Illustrations and 11 Colored Plates. Sixth Edition. Revised and Enlarged. St. Louis. The C. V. Mosby Company. 1926. Price \$12.00.

Dr. Sutton's *Diseases of the Skin* sprang into immediate favor on its first appearance. Not only did it set forth the best thoughts and most approved methods of the day, but there was about it a certain flavor of freshness and originality not always found in systematic treatises. A carping critic once said that a textbook is a voice from the tomb, but this book had nothing about it redolent of grave-mold; on the contrary it was as much alive as its virile

and dynamic author. Even this first edition contained articles on rare and exotic diseases, in most cases accompanied by excellent illustrations, usually omitted from our textbooks. This feature has been continued and amplified in later editions, while more familiar topics have been extended and brought up to the last word in dermatology, so that the book has grown both in value and volume.

The fifth edition appeared two years ago and now we already have the sixth, which more than fulfills the promise of its predecessors, as many as eight titles appearing for the first time.

Dr. Sutton's book reflects the fact that the science of dermatology is today growing at a rapid rate and that only a man of vigorous industry can keep step with the march of its present progress. This the author has done, as shown in his successive editions, of which the sixth is the latest but we trust not the last.

The publishers are to be complimented on the excellent get-up of the volume and the character of the illustrations, both half-tones and colored plates. These are furnished in great profusion, thus greatly adding to the value of the work inasmuch as a good picture will often give one a clearer idea than would several pages of careful description.

If we of Missouri have to be shown, here is a book, written and published in Missouri, that will show us and that we can proudly show others.

J. G.

THE DIAGNOSIS, TREATMENT AND END RESULTS OF TUBERCULOUS DISEASE OF THE HIP JOINT. By George Perkins, M.Ch. Oxon., F. R. C. S. Eng., Assistant Surgeon to the Royal National Orthopedic Hospital; Assistant Surgeon to Pyrford Orthopedic Hospital; Orthopedic Registrar, St. Thomas's Hospital. Oxford University Press. American Branch, 35 W. 32nd St., New York City. Price \$1.75.

This excellent monograph was awarded the Robert Jones Prize in 1924 and was published under the auspices of the British Orthopedic Association. While brief and concise, consisting of only about one-hundred pages, it thoroughly covers the subject of tuberculous hip joint disease.

The author emphasizes the importance of an early diagnosis and, as he properly states, that just as in pulmonary tuberculosis the prognosis and the curative results are proportionately better where the diagnosis is made early. The book is profusely illustrated with good drawings, pictures and plates.

Too much can not be said in praise of this monograph and it is highly recommended to all orthopedists, as well as to the general surgeon and practitioner interested in the very latest and best methods of treatment of this condition.

A. C. H.

LES ANGINES DE POITRINE. Par Louis Gallavardin, Médecin des Hôpitaux de Lyon. Paris. Masson et Cie, Editeurs, 120 Boulevard Saint-Germain, 120. Prix 25 fr.

This very interesting monograph by a distinguished representative of the younger generation of French cardiologists, gives an excellent resumé of the principal theories that have been advanced to explain angina pectoris. After reading this work one gains the impression that Gallavardin supports the view that angina pectoris is largely of coronary origin. The author considers that angina pectoris is quite different from the syndromes due to cardiac and aortic dilatation and stresses the importance of spasmogenic factors in the causation of the disease.

The monograph summarizes twenty personal observations with autopsies and contains an excellent bibliography.

R. H. M.

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ORIGINAL ARTICLES

EARLY DIAGNOSIS AND TREATMENT OF POLIOMYELITIS*

FRANK C. NEFF, M.D.
KANSAS CITY, MO.

My subject deals with the recognition of the disease at the earliest possible moment and the treatment before severe nerve injury has taken place. All will agree that such ideals are desirable.

Over ten years ago I read a paper before this Society dealing with the subject of the pre-paralytic diagnosis of poliomyelitis. In the discussion our lamented Dr. Kuhn facetiously remarked that such diagnosis is impossible in sporadic cases, and that in epidemics every illness, even the "pip," is classified as potential infantile paralysis. In the last few years however sufficient knowledge has been accumulated to make possible the early recognition, even though there are few pathognomonic symptoms. The epidemic occurrence is the greatest single feature in the diagnostic picture.

It is interesting to note that the percentage of false diagnoses in cases sent to the New York hospitals during the 1916 epidemic was only one and one half. This was largely due to the fact that a diagnostic staff sent one of its members to the home of all suspects. Many cases were admitted to the hospitals within the first twenty four hours. It would seem advisable for every city to adopt this plan. During epidemics it is safer to consider all obscure febrile conditions especially in the summer as poliomyelitis, just as all throat membranes are to be at first treated as diphtheritic.

Authorities now agree that the disease can exist without paralysis, and that nonparalyzed cases comprise half the number. This should make us more conservative in assuming curative qualities in therapeutic measures, and it should aid us in isolating sources of infection and spread. Cases which are not bedfast may be carriers, as evidently occurred in the prac-

tice of Dr. Eldridge last summer. He found that a child, sick two or three days with indefinite febrile symptoms, antedated by a few days a definite paralysis in another child in the same home. A second more serious case in a family may occur from augmentation of the virulence by passing through the first member. Among the nonparalytic cases are those children who show some weakness but without sufficient nerve injury to cause definite palsy. Meningitic and encephalitic types are classed in this group. Spastic paralysis from this cause is rare, but one sees children who were perfectly normal for the first year of life and had learned to walk who afterwards had a severe febrile disturbance followed by spastic paralysis. The course and character of this type are much different from the usual spinal form. The early symptoms of the bulbar type may resemble those of the spinal until the throat becomes involved. Last summer there were at least four of this variety in the small epidemic in this city. One case occurred in the practice of Dr. Swinney. He was called on the fifth day of the disease to find a child, not bedfast, who was being given worm medicine by the mother. When he saw the child, paralysis of deglutition had developed with collection of mucus and saliva in the pharynx. The knee jerks were abolished but the extremities were never paralyzed. The child was sent in a dying condition to Bell Hospital. The autopsy by Dr. Wahl revealed typical minute changes in the medulla.

What are the symptoms belonging to the earliest stage? After an incubation period of a few days to one week, the prodromal stage appears and varies from a few hours to three days. The disease is at first a general systemic infection which is the same in all types and irrespective of the development of palsies. From the accepted fact that the route of infection is from the mucous membrane of the nose, throat and mouth, acute inflammation of these regions must be considered one of the early symptoms, although not always evident. The tonsils are reddened or enlarged. Goodpasture believes that there is an herpetic lesion in all cases. Looseness of the bowels or constipation in the child leads one astray in this early diagnosis. Vomiting is toxic and not projectile. There

* Read at a symposium on poliomyelitis before the Jackson County Medical Society, Kansas City, May 4, 1926.

may be freedom from further symptoms for a day or two, but the physician is usually summoned because of fever which he finds to be from 102 to 105 degrees F. This stays up until paralysis is well defined.

The appearance of the child and the character of the disposition give a clue to the nature of the disease. Above all, the fretfulness, irritability and apprehensiveness, the emotional or hysterical tendencies, are peculiar to this early stage. The child is found lying in a position which indicates profound discomfort. The neck may be somewhat rigid, and attempts at examination will disclose pain on bending the head forward. There is marked spinal pain and tenderness and hyperesthesia over the whole body. Draper believes from the observation of many cases that the early manifestations are characteristic. He has described the glossy appearance of the sclera and cornea, the puffiness about the eyes. The child is not so alert or eager in the expression of the eyes and face, but is easily annoyed. There may be headache and backache. Cranial nerve involvement causes stupor, less pain and no involvement of the peripheral nerves. Breathing is quickened.

The deep tendon reflexes are irregular and soon lost on the affected side, but normal, weak or exaggerated on the unaffected side.

Sweating, dyspnea, irregular breathing are general symptoms not diagnostic in character. The blood picture does not help, though the leucocytes are increased. The pulse is higher than can be explained by the fever.

It is not probable that the sporadic case will have a spinal puncture performed. The fluid is suggestive and enables one to exclude purulent meningitis. It is abundant and under increased pressure. In one case at the General Hospital it never arose above 8 mm. of mercury until the day before death. The cell count is only a method of showing any inflammatory reaction. It may be slight at first and abnormally high later in the active stage. The increase is in the small mononuclears. Globulin is absent in the early period, and there is no increase in sugar. A bedside test of value but not specific for this disease is the ground-glass haziness of the spinal fluid, when the test tube is observed in a darkened room against an artificial light. Blood in the fluid interferes with this test.

Finally, motor paralysis appears in a few days, occasionally as early as twenty four hours. It reaches its maximum in three or four days, occasionally not until a week.

The early diagnosis is most often confused with summer complaint, chorea, suppurative or tuberculous meningitis and epidemic encephalitis. Time does not permit the discussion of these points.

Treatment. In the New York epidemic more than half of those cases living after twenty four hours were treated in hospitals by the board of health. All the previous methods were used in the attempt to estimate their value. General measures were anodynes, hot baths, oxygen inhalations for dyspnea, and nourishing food. Urotropin was used at the Willard Parker Hospital and none at the Riverside. No difference in results was noticeable. The wearing of masks was abandoned as no attendant developed the disease. Adrenalin intraspinaly was unavailing. Spinal puncture relieved pressure and was often followed by general improvement. Intraspinal injection of quinine and urea was without effect. The use of horse serum and convalescent sera was disappointing, probably because intraspinal treatment does not reach the disease in the brain and cord. The meninges are not affected in poliomyelitis. So, little effect may be expected when serum is injected into the canal; in fact the injection may be harmful.

Theoretically immune or convalescent sera given by vein or muscle before permanent damage has been done to the nerve tissues would seem to offer the most hope. Serum is preferably obtained from donors within two or twelve months after their attack.

In 45 cases treated during the past year in San Francisco by Fleischner and Shaw, seven were recognized during the preparalytic stage, the diagnosis being arrived at by the history and suggestive findings, particularly the rigidity of the neck, tremors and slight muscular weakness. In a personal communication the San Francisco men state that in five such cases the spinal fluid findings confirmed the diagnosis. In seven early cases, convalescent serum or whole citrated blood was administered intramuscularly and all recovered without any paralysis. Two other cases with the dromedary type of infection were improved after serum treatment. Ten others were treated late without evident benefit. They use no serum intraspinaly and depend upon intramuscular injections.

For the next case I see I hope to secure a convalescent donor, if possible, or an immune subject from whom to get blood for transfusion into the vein of the affected child. Infantile paralysis is well reported to the health department, and the writer would suggest that all adults recovering from this disease be followed up by the department of health so that convalescent blood can be obtained when needed.

In Kansas City we have used considerable Rosenow serum, but I believe we have not accorded it a fair trial in that it has been given late, in insufficient doses, and often by the intraspinal route which cannot be successful.

It will take a considerable experience in a large epidemic to find whether it has definite value.

To summarize the early treatment: complete rest in bed with the extremities in the most comfortable and supported position; anodynes when needed; if the spinal fluid is markedly increased, lumbar puncture to be done daily as long as this is the case; intramuscular use of ten to twenty cc. of human convalescent serum on the early days of the disease. That the pre-paralytic stage is difficult of diagnosis and serum hard to obtain is granted, but these factors do not detract from the value of such procedures.

214 Medical Arts Building.

THE CUTANEOUS MANIFESTATIONS OF ACQUIRED SYPHILIS*

NORMAN TOBIAS, M.D.

ST. LOUIS

HISTORICAL

Syphilis has been with us for four hundred years or longer and while its ravages have become somewhat less intense it is doubtful if mankind will ever become immune to this scourge. It has been estimated that there are at least five million syphilitics in the United States resulting in an annual economic loss of a half billion dollars.

The first authentic reports of the prevalence of syphilis date back to 1494 when soldiers in the army of Charles VIII of France developed syphilis during a raid in Italy. After the war the soldiers scattered over Europe and helped to disseminate the disease over the entire country. It is an interesting fact that the first appearance of syphilis in Europe practically coincided with the second return of Columbus and his men from America. A large number of these adventurous men had joined Charles' army in Italy and it is claimed that many of them had syphilis, which they had contracted from the natives of the Island of Haiti. Other authorities conclude that syphilis first originated in Eastern Asia, certain races of which invaded America by crossing the Bering Sea many centuries ago.

Syphilis was given its name by Fracastor in 1530 in a lyric poem in which there was a dramatic recital of its symptoms as they appeared in a certain shepherd, named Syphilus. Paracelsus was the first to suggest mercury in the treatment of the disease although this drug had been used many years before his time for all sorts of skin affections.

In the centuries that followed little progress was made in the study of the disease, although

the pure clinical aspects of the malady were not neglected. The medical minds of the 18th century were led astray by the teachings of the great English surgeon, John Hunter, who taught, from the results of experiments performed upon himself, that there were three venereal diseases, gonorrhea, chancre and lues. He considered them all due to the same poison or virus, the only difference being the nature of the surface involved. However, it was later shown that the contaminated pus Hunter used in his experiment contained spirochetes as well as gonococci, thus giving rise to his mistaken conclusions. Fortunately the French syphilographer, Phillippe Ricord, in 1838, definitely established the separate identity of syphilis and chancre.

The actual cause of syphilis still remained a mystery although dozens of organisms had been discovered in the various lesions of the disease from time to time. With the advance of the science of bacteriology in the early part of the 20th century, the zoölogist, Schaudinn, working with the syphilographer, Hoffmann gave to the world in 1905 the demonstration of spirochetes in the syphilitic chancre. In the years that followed, one great discovery after another led to a new conception of the disease and the beginnings of the new science of syphilology. In 1906 Wassermann, working with Neisser and Bruck, developed a practical blood test for the detection of syphilis which was based on the previous work of Bordet and Gengou on complement fixation. An important addition to our therapeutic armamentarium was given us by Ehrlich who discovered salvarsan in 1909. In later years advances have been made along the line of social hygiene, the additions of refinements in the Wassermann test, the development of the Kahn test, and the introduction of new drugs, such as bismuth, sulpharsphenamine, tryparsamide and non-specific therapy.

DIAGNOSIS OF SYPHILIS

Syphilis is a protean disease and its skin manifestations are only a part of the generalized pathological process which occurs. Therefore, a diagnosis of syphilis requires a careful general examination of the various systems as well as suitable laboratory aids. In spite of the prevalence of the disease, mistakes are frequently made so that caution must be employed in the diagnosis. As Hazen, of Washington, warns his students: "Be quick to suspect syphilis, be slow to diagnose it."

Although cutaneous syphilis is relatively common, comprising about ten per cent. of the usual run of skin diseases, the tendency of many medical men to diagnose syphilis on insufficient evidence is to be deplored. Many depend upon a single weak Wassermann and

* From the Department of Dermatology and Syphilology, St. Louis University.

others mistake minor skin affections for the disease. Too much faith must not be placed on the Wassermann reaction alone, for clinical evidence is still the most important factor in arriving at a diagnosis. It is important to recognize and treat syphilis as a general infection, the skin manifestations being only one of a number of its outward signs. The best procedure is to obtain a careful, complete history and a thorough physical examination in every case where syphilis is suspected.

The following will serve as a useful outline in the questioning and examination of suspected or apparent cases.

OUTLINE OF EXAMINATION

1. *Personal history.* While history is important too much faith must not be placed in the statements made by the patient. Some will intentionally try to deceive the physician, others truthfully deny a history of infection. Women especially may not recall the presence of a primary sore. Foreigners should be questioned through an interpreter if possible. Skin eruptions should be examined and diagnosed before the history is taken to avoid bias.

2. *Family history.* This should be gone into, especially in cases of a congenital type. One must use tact in questioning the members of a family or otherwise domestic tragedies may result. Where husband or wife is affected the other marital partner should always be examined as well as the children. In clinics this phase of the subject may be left to an experienced social service worker. It is well to remember that over six per cent. of the cases are contracted innocently.

3. *General physical examination.* This should include examination of the heart, taking of the blood pressure, and urinalysis. The eyes, mouth and mucous membranes, the throat and tonsils, bones, especially the tibia and clavicle, joints, liver, lymph nodes, and the reflexes should be examined. The genitals should be inspected for sores and old scars. Never neglect the mouth and anus in every case of suspected syphilis.

4. *Special examination.* Special symptoms presented by the patient will require special examinations. The eye may present an iritis or optic nerve changes; the cardiovascular system may show aneurysm or an aortic regurgitation. The nervous system may show signs of early involvement. When symptoms referable to the bladder are present, a cystoscopic examination may reveal early signs of tabes dorsalis. Esophageal or rectal symptoms may be due to syphilitic stricture, demanding special examination.

5. *The Wassermann reaction.* Blood for

this test is taken by routine in all of our large clinics. In this way many unsuspected cases of syphilis are revealed. The test is very useful, provided it is not depended upon alone and is performed by a competent and experienced serologist. One should be very cautious in diagnosing syphilis based only on one positive Wassermann in the absence of other evidence of the disease. In any case where doubt arises the serology should be repeated or verified by other laboratories. A weak or partially positive Wassermann does not necessarily mean that the patient has syphilis. It may be due to faulty technic or improper readings. On the other hand, a negative Wassermann does not mean the absence of syphilis. It usually does not become positive until about five weeks after the appearance of the chancre. It is well to remember that the Wassermann is positive in over ninety-five per cent. of cases of secondary syphilis.

6. *Spinal fluid.* In every case of syphilis presenting neurological symptoms the spinal fluid should be examined with special reference to the Wassermann, cell count, globulin, and colloidal gold curve. Every arrested case of syphilis, before final discharge, should have a spinal fluid examination.

7. *The X-ray* is often used by the syphilographer in the diagnosis of various bone and joint lesions and in examination of the cardiac area for involvement of the heart or aorta.

8. *The dark field* should be a part of the equipment of every syphilis clinic and should be used by those physicians who see many cases of syphilis in its primary stages. It constitutes an important means of early diagnosis by those properly trained in its use. Suspicious ulcers can be diagnosed without waiting for the Wassermann to become positive or secondaries to appear. Dark fields on mouth lesions are usually unsatisfactory because of contamination with mouth spirochetes and spirellae.

THE PATHOGENESIS OF CUTANEOUS SYPHILIS

The characteristic lesion of syphilis is a granuloma. All the lesions with the exception of those of macular lues are more or less indurated from the formation of a granuloma in the corium. This granuloma is a vascular structure and is composed chiefly of plasma cells, small round cells, collagen bundles, and many new blood vessels.

The multiformity of the skin lesions in syphilis is due to several factors, such as the location of the lesions, secondary infection, trauma, vascularity of the part and the severity of the infection.

The chancre is primarily a papule in form. Frequently it tends to become eroded from

friction, or ulcerated from a secondary infection with pyogenic organisms. In this condition it usually remains for three or four weeks, then undergoes spontaneous healing and is replaced by an indurated scar. The total duration of the chancre from its appearance to its complete healing is usually about six weeks. The chancre represents a local reaction of the skin to the presence of the spirochetes *in situ*. It must be remembered that the organism has already invaded the blood stream when the chancre appears. The dense infiltration of plasma cells and a new growth of white fibrous tissue give the lesion its characteristic hardness.

The skin lesions of syphilis display an extraordinary multiplicity in their clinical manifestations, although the pathological process is simple and uniform in type yet different in degree in the various lesions. Each lesion is the result of a local reaction of the skin to the presence of spirochetes which have reached it by way of the blood stream. The presence of the organisms in the skin causes a reaction in the superficial skin capillaries and slight proliferative changes in the endothelium, thus giving rise to the early erythematous or roseolar lesions. Later the vascular reaction is followed by a plasma cell infiltration and a new growth of fibrous tissue. This pathology gives rise to the various types of granulomata. When after a time the infiltration extends more rapidly, the vessels become occluded by proliferative changes in the endothelium and adventitia. The lesions tend to break down and ulcerate. Healing takes place without subsequent scarring in the early lesions, whether papular or erythematous, but in the granulomata in which the corium and subcutaneous tissue are broken down scarring is inevitable. The scars of healed late luetic lesions are sometimes kidney or horse-shoe shaped and may be of diagnostic importance.

CHARACTERISTICS OF SKIN LESIONS IN SYPHILIS

Generalized skin lesions that follow the appearance of the chancre are due to a widespread invasion of the system with the spirochete. About eighty per cent. of syphilitics have some cutaneous manifestations in the course of the disease. The skin manifestations are so multiform that it is difficult to describe them adequately. However, they have certain characteristics which are common to the majority.

The early secondary syphilides are distributed symmetrically and in the vast majority of instances affect the trunk as well as the neck and limbs. The macular syphilide, which occurs in over half of all cases in whites and is the predominating type of eruption, as

a rule selects the body and limbs and is rare on the face, palms and soles. This type of eruption is said to be rare in the negro and mulatto, possibly because it is frequently overlooked.

The papular syphilides are more common in the negro, involving the trunk, limbs, face, scalp, and frequently the palms and soles. Upon the face they are prone to develop just below the hairline. The back of the trunk is more frequently affected than the chest or abdomen. Eruptions involving the lower half of the trunk should make one suspicious of syphilis.

The lesions of late syphilis are local and asymmetrical. They are usually limited to comparatively small areas but may exceptionally occur in many places. The sites of predilection are the forehead, chin, upper lip, neck, buttocks and outer aspects of the thighs.

The majority of syphilides have a peculiar tint which has been described in the text books as a "coppery" or "raw-ham" color. However, most observers agree that such is not always the case. The usual color may best be described as a dull pink in the early stages and a coppery color in the later stages. Color is not a distinguishing feature of syphilis and consequently cannot be relied upon in differential diagnosis.

With the exception of the early roseolar and pigmentary lesions, the syphilides as a rule are definitely indurated from the presence of dense cellular infiltrations in the corium. Induration is best determined by applying the middle or ring finger to the lesion, or by the use of a dioscope.

The early syphilides come out comparatively rapidly and after persisting for a variable period disappear spontaneously. The papular lesions, after remaining several weeks, tend to become squamous and may leave pigment which may persist for some time. If left untreated, the syphilides usually involute spontaneously in the course of several months although late lesions may remain active over a long period.

One of the chief characteristics of syphilitic eruptions is grouping. This is due to involvement of the peripheral arterial trees in the skin. The lesions usually remain discrete, but in the late types they may coalesce to form circles, fragments of circles, or characteristic serpiginous and gyrate figures. Occasionally annular or ring lesions may develop, especially around the mouth in negroes. This is not a rare form of syphilis in this race and is almost pathognomonic. Sometimes the lesions may be grouped in clusters or a number of small lesions may be arranged around a single large lesion.

Sensory symptoms are usually absent unless the lesions are irritated by friction or moisture as in lesions in the mouth or on the perineum.

More or less severe itching occurs in about five per cent. of the cases in negroes.

The cutaneous syphilides especially the early types are peculiarly amenable to arsphenamine and mercury. Local treatment has but slight effect upon them.

The spirochete may be obtained from any of the cutaneous syphilides but is present in greater numbers in the early and moist types. Mucous patches and condylomata are very infectious because of the large numbers of organisms present on the surface.

The Wassermann reaction is strongly positive in practically all untreated cases when cutaneous lesions are present. A positive reaction may occasionally be obtained in certain other diseases, such as leprosy, some of the exanthemata, acute alcoholism and ether narcosis, but it is too inconstant to be of any importance.

In recent years the Kahn test has become very popular in the diagnosis of syphilis. The results are interpreted as in the Wassermann reaction. The test is valuable in that it eliminates the use of such variable factors as sheep blood cells and guinea pig complement, and is in this respect less subject to error than the Wassermann reaction. Another point of superiority over the Wassermann is the rapidity with which the test can be performed, making it valuable in cases where early diagnosis is demanded. The test is useful in checking up on the Wassermann.

UNCOMMON SKIN MANIFESTATIONS OF SYPHILIS

The pigmentary syphilide. This lesion is rather uncommon and probably frequently overlooked. It is usually observed in women. The neck and shoulders are the common sites of the condition. It occurs especially in brunettes under thirty-five. The lesions usually occur later in the secondary stage of the disease. The etiology of this eruption which may exist as a hyperpigmentation or a depigmentation is as yet unsettled. This pigmentary syphilide may be a chloasma depending upon the syphilitic infection or it may be due to secondary changes following the ordinary macular eruption. In its usual form it is a more or less symmetrical, diffuse, brownish discoloration with reticulated leukodermic changes. The pigmented areas do not disappear upon pressure. The condition may exist from a few months to several years. It may be the only manifestation of the disease. It is not influenced by antisypilitic remedies.

Syphilitic alopecia. Involvement of the scalp usually occurs in the early part of the secondary stage. The condition is not a visible alopecia but is a general thinning of the hair which acquires a dingy look. Later the hair

may fall out in patches giving rise to the so called "moth-eaten" appearance. The disease usually involves the posterior half of the scalp. It is not permanent as a rule. The condition is due to the presence of spirochetes in the hair papillae and is usually aggravated by an old seborrhea. Occasionally the hair of the moustache, eyebrows or lashes may fall out but this is rare.

Syphilis of the nails. The nails may be involved in any of the stages of syphilis. The nail fold may be the site of a chancre, probably because of the frequency of hangnails. Late changes in the nails may be due to the general constitutional infection resulting in discoloration, brittleness or irregular growth. In other cases, paronychias or onychias may develop. Syphilis of the nails is often rebellious to specific treatment.

PROGNOSIS OF SYPHILIS

It is a difficult matter to prognosticate the outcome of an early case of syphilis. Syphilographers agree that early intensive and prolonged treatment in most cases favors a good prognosis. Treatment should be given as soon as the diagnosis is made. Primary and secondary syphilis usually react best to treatment. The spirochetes should be bombarded with mercury and salvarsan while they are still in the blood stream and lymphatics and before they have concealed themselves in organs and have been surrounded by fibrous tissue. The duration of treatment depends on the nature of the case, clinical symptoms, the effect on the serology and the common sense of the physician. Overtreatment is as bad as undertreatment and each patient should be carefully examined from time to time with special attention to the urinary findings, cardiovascular system and spinal fluid examinations.

Patients over 65 should not be given arsenicals. This potent drug is also contraindicated in hypertension, arteriosclerosis, exfoliative dermatitis and in those who have had reactions.

Although the fact has not been definitely established, experience has led us to believe that there are various strains of spirochetes. Certain strains of organisms may have an affinity for the skin. Marked eruptive cases offer a better prognosis, immune bodies being liberated or formed in the skin decreasing the virulence of the spirochetes. The freedom of this group from neurological involvement is well known. There may also be neurotropic strains with an affinity for the nervous system, strains with an affinity for the heart and vascular structures, weakly pathogenic strains and strains that are resistant to chemotherapeutic agents. When the nervous system is attacked early in the course of the disease the prognosis

is grave; the same holds true for early cardiovascular involvement. We know that there are certain cases of syphilis which seem to resist prolonged treatment in that they do not show any change in the serology. We speak of these cases as arsenic-fast or mercury-fast, as the case may be. Tolerance to insufficient treatment in the early stages of the disease probably accounts for this condition. Cases of syphilis with persistent pathological findings in the spinal fluid do not offer a favorable prognosis.

Syphilis as is well known is severe in aboriginal races. The negro race is especially susceptible to the disease, aneurysms, large gummata and ulcerative lesions being frequent. Alcoholics do not react well to treatment and usually have severe skin manifestations.

Every syphilis clinic cares for a large group of cases of latent or concealed syphilis in which the Wassermann is positive and in which there may or may not be a history of infection. Physical examination may be entirely negative. These cases offer a good prognosis. Since the Wassermann reaction is our only guide in the treatment of these cases, it is difficult to estimate the effects of treatment. Some latent cases, especially in aged, poor risks, should have a minimum amount of treatment if clinically free of symptoms. Other latent cases may harbor a non-pathogenic strain of spirochetes which keeps up the positive Wassermann but produces no ill effects on the host. These people are clinically, but not serologically, well. In some, treatment may bring about an activation of foci with serious results. Each case should be considered individually, routine treatment avoided, and careful examinations performed from time to time.

The diagnosis should be presented to the patient with due regard to his feelings. While the physician should be optimistic, the importance of long continued treatment and observation should be stressed. In non-eruptive cases, the possible sources of infection should be explained. Treatment should be instituted as soon as the diagnosis is made, but a careful physical examination should always be made first. Special attention should be paid to the heart, blood pressure, kidneys and liver.

TREATMENT

Arsphenamine is our therapeutic sheet anchor and is preferable to other forms of arsenic therapy. It is to be recommended for rapid and immediate sterilization. Neoarsphenamine is weaker but may be given in place of salvarsan by increasing the dosage. Sulpharsphenamine may be given intramuscularly when the veins are too small for intravenous therapy. Mercury is also an important remedy. The

iodides are used in treating late types. Bismuth has come into prominence in the last few years as a drug useful in clearing up Wassermann-fast cases, and is a good drug to use when arsenic is contraindicated. Tryparsamide, a new drug, has been shown to be useful in certain types of neurosyphilis but has no place in the treatment of skin manifestations.

There are almost as many methods of treating syphilis as there are men who treat the disease. The course method with variations is universally used by syphilographers and is employed in all the large clinics where syphilis is treated. Syphilis is best treated by this method, which is systematic and gives the patient a period of rest between courses. In primary, secondary and pregnant cases an intensive course is given which consists of three salvarsans given one week apart followed by twenty mercury injections given three times a week. In these cases salvarsan is given early in order to sterilize the blood and render the patient noninfectious as soon as possible. In neurosyphilis it is our custom to give six injections of tryparsamide and three salvarsans with twenty mercury injections in the course. Before beginning tryparsamide therapy the patient must undergo an ophthalmological examination for evidence of optic nerve changes. Potassium iodide should also be given at intervals. A regular course of treatment consisting of twenty mercury injections and one salvarsan, which is given at the end of the fifteenth mercury, is given to all latent cases and also follows the intensive course of treatment.

At least three courses of treatment must be given in any case with monthly rests between courses. Wassermans may be taken at the end of each course to determine the progress of the patient. The patient is not discharged as an arrested case unless he has had at least three consecutive negative Wassermans taken at regular monthly intervals for a year and is free of subjective and objective symptoms. A lumbar puncture should also be made and provocative salvarsan given before discharge.

Wassermann-fast cases receive a course of fifteen bismuth injections instead of mercury, with salvarsan increased to three in a course unless it is contraindicated.

It is useless to treat the chancre locally with caustics or antiseptics as a preventative measure, since the organisms have been found within forty-eight hours after experimental infection in the draining lymph nodes and within a week in the blood stream. Skin lesions disappear quickly under the influence of arsphenamine. Occasionally local treatment must be used during the secondary stage. Offensive ulcerative lesions about the genitals or anus

may be treated locally with pure calomel powder or iodoform. Condylomata may also be cleaned up with this dry treatment or touched up with silver nitrate stick. Mucous patches in the mouth demand absolute cleanliness and abstinence from smoking or chewing. A concentrated solution of the acid nitrate of mercury is often effective in destroying offensive ulcerative lesions and condylomata.

Carious teeth or diseased gums increase the possibility of a stomatitis from mercury and bismuth and should be treated early. Tertiary lesions usually heal slowly under iodides, mercury and arsenic medication. It is frequently difficult to make patients understand that they are by no means cured when the skin lesions disappear, and every effort should be made to explain to them the importance of prolonged treatment.

CONCLUSIONS

1. Every suspicious ulcer should be subjected to a dark field examination wherever possible in order to obtain an early diagnosis so that immediate treatment may be instituted. In this manner, a diagnosis may be obtained without waiting two or three weeks for the Wassermann to become positive. Of course, a negative examination does not absolutely exclude syphilis since the factors of proper technique, number of organisms present and previous treatment must be taken into consideration.

2. The Wassermann reaction must not be regarded as an infallible index to the presence or absence of syphilis. Too often it is the only diagnostic aid used by the physician. A complete physical examination and history are very important and should never be omitted.

3. Every suspicious eruption demands careful diagnosis. Many patients have been placed on antiluetic treatment over long periods of time without a proper diagnosis having been made. An eruption in a patient with a positive Wassermann or Kahn test does not necessarily indicate that the eruption *per se* is due to syphilis or will react to antiluetic treatment.

4. Once the diagnosis of syphilis is made, intensive treatment in the early cases and intelligent continued treatment in the late and latent cases will do much toward decreasing the unfortunate and grave complications which sometimes occur in improperly treated cases.

5. In view of our increasing knowledge regarding the behavior of this disease, it seems advisable to use the word "arrested" in place of "cured." While symptomatic "cures" are frequent enough, serologic "cures" are not so easily obtained. Reinoculation, the true biologic test of cure, has proven that complete cures do occur.

PROGNOSIS IN CARDIOVASCULAR SYPHILIS

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The statistics relative to the prognosis in cardiovascular syphilis are extremely contradictory. Longcope reports that seventy per cent. of his cases died within a two year period subsequent to the establishment of a diagnosis. He summarizes the situation by stating that the prognosis is bad, particularly in the hospital type of cases where it is the exception to find a case diagnosed as myocardial syphilis alive at the end of the five year period. Majors is of the same opinion and is pessimistic both as to the duration of life and the response to specific treatment. Although such a gloomy prognosis is the rule among many clinicians, we are all familiar with the clinical manifestations of aneurysm in an individual who will lead a comparatively active life over a long period of years. Such a thing can only mean that as a whole syphilitic invasion of the heart and great vessels is a progressive process and the rapidity with which the degenerative changes occur varies over a wide field, depending entirely upon the individual resistance to syphilis and the specific treatment administered. In exceptional cases, from the infection to death, the period of time may be as short as five years; or the process may be extremely slow in its evolution and extend over a long period of years. It is impossible to separate the question of the prognosis in these cases from that of the individual response to specific therapy. In short, the therapy administered is to be given careful consideration as part of the prognosis. We are familiar with the fact that aortics with arrhythmias, tachycardias and anginal attacks as a whole, do not do well. Individuals whose cardiac syphilis has existed over a long period of time offer a poor therapeutic response to treatment. All these factors must be weighed and considered in an attempt to formulate a prognosis. Let us recall Sir William Osler's statement, that it is in the aortic lesions that the unexpected happens. This clinical observation is well borne out by the behavior of the cardiovascular syphilitic. There is an almost unanimous opinion among cardiologists that antisyphilitic treatment is beneficial in many instances of cardiovascular syphilis; and as a broad general statement it may be accepted that the benefits of specific treatment are in direct ratio with the age of the syphilitic infection. In short, comparatively young manifestations of syphilis respond to treatment, while those of longer duration show but little

improvement. And to further complicate the situation, almost every observer reports that a certain percentage of these individuals are definitely injured and made worse by treatment.

What occurs when neosalvarsan and mercury are administered to the syphilitic individual is a matter of much speculation and has received the intensive study of many competent observers. That there is some reaction from the administered specific, be it organic arsenic or mercury, may be accepted as an established fact. To support this idea we have but to watch the color changes in the skin manifestations of secondary syphilis twelve to twenty four hours subsequent to the administration of either specific. This reaction was first described by Herxheimer long prior to the introduction of organic arsenic in the treatment of syphilis. The same reaction may be produced with organic arsenic, or frequently a constitutional reaction with marked augmentation of the preexisting secondary manifestation of syphilis on the skin and particularly in the glandular system, is observed. This thing is described in the literature as the generalized reaction of Neisser. This reaction cannot be produced in a nonsyphilitic individual even though enormous doses of specific medication are administered, and is convincing proof that there is a specific reaction between the *treponemata pallida* in the tissues of the syphilitic individual and the administered specific, providing of course the administered specific was given in a large enough dose to produce symptoms that can be clinically recognized. In my opinion, this is the explanation why certain cardiac syphilitics are made worse by the administration of antispecific treatment. One can only ascertain the response to specific medication some weeks subsequent to the institution of the treatment. It has been my experience to note that those individuals whose treatment was begun with extreme caution, and whose subjective sensations have received the utmost consideration, have offered the best ultimate prognosis and have responded in a superior manner to syphilitic medication. In short, subjective improvement subsequent to the institution of minute doses of mercury and potassium iodide over a comparatively long period of time, is indicative that this particular individual will offer a comparatively good prognosis. One may classify the response to treatment in three definite groups:

1. Those definitely made worse whose symptoms are augmented by treatment. If treatment is administered with an extreme degree of caution, this group becomes very small.

2. By far the largest group of cases that will show considerable subjective improvement, particularly in the pain sense. This group com-

prises at least sixty per cent. of the cardiovascular syphilitics. The process is progressive and terminates in death, but the condition is markedly inhibited and the degenerative nature of the disease is to a degree arrested. In short, the prognosis is much better as to the span of life under the influence of treatment.

3. The group of cases in which the individual responds to specific medication with brilliant therapeutic results. This group of cases is comparatively small yet are encountered with sufficient frequency to convince one of their existence. In this particular group of cases there is of course no organic improvement, but the subjective improvement is remarkable and the relief from cardiac pain subsequent to the institution of treatment is complete. One may state with considerable degree of accuracy, that the greatest single prognostic element in any case of cardiovascular syphilis, is the improvement of the subjective symptoms of the pain subsequent to the institution of treatment.

I should like to report three cases which correspond to a degree, to the three groups in which the cardiovascular syphilitic falls.

REPORT OF CASES

Case 1. This is a patient 44 years of age, a horse-shoer by trade, who denies all history of an acute infectious disease. He states that at 22 years of age he contracted syphilis, for which he received approximately six months treatment with mercury by mouth. Eighteen years subsequent to this time he complains of morning cough with profuse expectoration and states that the sputa comes from the base of his left lung and that he is conscious, on deep inspiration, of a bubbling at the base of his left lung. There is a moderate aneurysm of the transverse aorta. The heart is practically normal in size and no murmurs are present. The Wassermann was 4 plus. This patient was placed upon antisymphilitic treatment consisting of potassium iodide, small doses of mercury and about four weeks subsequent to the institution of treatment .2 grms. neosalvarsan was administered intravenously. Four or five days subsequent to this he complained of precordial pain, anginal in character, shortness of breath and pain on exertion. Let us recall that these subjective cardiac symptoms were not present prior to the institution of treatment. We are dealing with an individual whose cardiac level was markedly decreased by the administration of specific medication. A two meter plate made some eighteen months subsequent to this disastrous attempt at specific medication showed marked increase in the size of the aneurysm.

Case 2. This man is 41 years of age, previous history is negative. He complained of pain in his upper mediastinum which radiated through to the back, general weakness and inability to work. Examination shows slight cardiac hypertrophy and a diastolic murmur over the aortic area. B P 170-40. In the early part of 1922 this patient was placed on small doses of mercury by hypodermic injection along with potassium iodide intermittently. The response to treatment was good and at this time the patient is working every day at his trade as a stonemason and is free from all subjective sensations of cardiac embarrassment except on violent physical exertion. This individual's response to treatment represents

the results obtained in a high percentage of cases of cardiovascular syphilis; definite improvement and a marked inhibition of the degenerative syphilitic process.

Case 3. This individual came under my care in August, 1920, complaining of pain in the left side of his chest which radiated behind the ear. This pain was anginal in character and was produced upon the least muscular exertion. He had been a semibed patient for six months. Treatment was instituted with mercury and potassium iodide by mouth, with marked subjective improvement. In August, 1921, this man was free from all subjective cardiac sensations and he has been employed daily for the past four years. It is interesting to note that in August, 1920, at the time of his original examination this man presented a systolic blood pressure of 210 and a diastolic pressure which could not be read; at present his systolic pressure varies from 160 to 180 and the diastolic pressure cannot be read. This is an example of a brilliant therapeutic result subsequent to the cautious and prolonged administration of mercury and potassium iodide in a cardiovascular syphilitic. Unfortunately the percentage of cases that respond so brilliantly to specific therapy is small.

The prognosis in cardiovascular syphilis is so intimately associated with the individual response to specific medication that it can only be formulated after long continued administration of specific medication. In my hands the best results have been obtained from small doses of mercury and potassium iodide administered over a long period of time.

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RADIATION IN THE TREATMENT OF NON-MALIGNANT CONDITIONS OF THE UTERUS*

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The value of radiotherapy in nonmalignant uterine conditions has been fairly well established. I desire to call your attention to a few of these conditions that respond to treatment by radiant energy, either X-ray or radium, or both. In this short paper I shall discuss: (1.) Menorrhagia; (2.) Uterine fibroids; (3.) hyperplastic endometritis; (4.) endocervicitis; (5.) urethral caruncle.

Many other pelvic conditions have been treated by radiation with more or less success but the above mentioned are among those oft-nest seen.

MENORRHAGIA

Before the advent of radium, uterine bleeding in adolescence and young womanhood presented a baffling problem. The etiology of this condition has never been determined. The various remedies for uterine hemorrhage, such as animal serum, gland extract, the different

styptics, iron, arsenic, etc., are all of uncertain value and repeated curettings are equally useless. The bleeding frequently continues for years and may reduce the patient to an extreme state of anemia. In many cases the surgeon is obliged to resort to hysterectomy and castration.

The early users applied radium only for the menorrhagia of women near the menopause. They were afraid to use this treatment on young women for fear of bringing on an artificial menopause. It was soon discovered that when radium was given in small or moderate doses, excessive menstruation could be diminished and regulated with a fair degree of accuracy.

When indicated, we do not hesitate to use it now, even on young girls, and it is believed by many that the ovaries of the young are able to withstand a greater exposure to radiation without losing their function than the ovaries of the older woman.

In regard to the manner in which radiation produces its effect, most men believe that not only the ovaries but the endometrium as well, are brought under its influence. Clark¹ of Philadelphia says radium in sufficiently large doses is capable of destroying the graafian follicles, as has been shown by the examination of ovaries that were removed following radium treatment. The extent of the destruction of the follicles depends upon the size and length of dosage and also on the age of the patient.

The primordial follicles are formed near the center of the ovary and as they develop they migrate toward the surface, finally culminating in a ripe corpus luteum.

A large dose of radium is sufficient to destroy all the follicles in the ovary, both young and old, but a moderate exposure may kill only the older and riper follicles which are near the surface, while the younger and less developed bodies, being deep in the ovary, escape its influence. This explains those cases in which the menstrual function is suspended for several months only to be resumed in a natural manner.

In other words, menstruation ceases during the time required for the younger and uninfluenced follicles to mature. The fact that menstruation is in most cases restored without the abnormal bleeding which before characterized it, may be explained by some minute but permanent change in the endometrium.

Following is the brief history of a typical case treated with radiation: Miss D, age 24. Began menstruating at 13; was irregular for two or three years then began to have profuse bleeding at menstrual periods, occasionally. Five years ago she noticed periods were more prolonged and she was under the constant care

* Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

of her physician. When we first saw her she was anemic, thin and emaciated, nervous and inclined to be hysterical. She was not able to work. Many of the usual remedies had been used, including horse serum which was always followed by severe attacks of hives. She had been curetted twice but without any change in her condition.

We put her to bed and packed 25 mg. radium, screened with brass and rubber, into the uterine canal. The first application was for ten hours. Three days later the same amount of radium was applied for twelve hours, making a dose of 550 mg. hours in all. The menstruation at the next period was about normal, the next was very scanty and after that she did not menstruate for eight months when it started again, normal and regular, with periods lasting four or five days.

She gained in weight, became full of "pep" and regained her health without any bad after effects from the treatment. She has now been married 18 months but has not conceived.

Complete sterilization is not brought about by a small or medium amount of radiation, although it can be obtained by a large dose, that is, a dose large enough to produce the menopause.

MYOMATA

Radiation, either X-ray or preferably radium, is a very satisfactory treatment in uncomplicated, small or medium sized myomata in patients at or near the menopause age.

Persistent bleeding is usually the serious symptom in these cases and is promptly checked by radiation which controls all bleeding, menstrual or otherwise. The majority of these cases prove amenable to this form of treatment. In some cases it is important to exclude carcinoma of the endometrium by a diagnostic curettage before radium is used.

Even fairly large fibroid tumors may be treated with radiation in patients with debilitating conditions, such as heart or kidney disease, or bad surgical risks for any reason. Growths as large as grape fruit and larger are better treated by surgery when the patient is a good surgical risk; otherwise, radium may be used. X-ray is not advisable in these cases as it sometimes causes extreme nausea and ill feeling. It also requires more time for results than radium. When the uterus is enlarged by a number of small fibroids radiation is the treatment of choice; a single large growth, or one that causes pressure, is a surgical condition as treatment by radium is too slow.

Radium will control the hemorrhage of uterine myomata and in a large number of cases will reduce the size of the growth, provided the tumor is intramural or submucous and not

pedunculated. But the indications for radium are limited and it has certain definite disadvantages, such as, first, danger of malignant complications already in the tumor. Radium is positively indicated in cervical cancer but cancer in the body of the uterus is surgical. Second, about one half of all fibroid cases are complicated by some form of tubo-ovarian disease and the results of treatment of the fibroid will be disappointing. Third, the danger of impairment of the reproductive functions in young womanhood. Fourth, when there is an old inflammatory lesion present, radiation is likely to cause a more or less severe "flare up."

HYPERPLASTIC ENDOMETRITIS

This condition as described by Emil Novak² is characterized by a genuine increase in both stroma and epithelial elements and a marked disparity of the glands, many of which are large and cystic while others are quite small, giving a swiss cheese pattern. Grossly speaking, the endometrium is so enormously overgrown that huge quantities are brought away with the curet.

The fact that bleeding in this type occurs only in the reproductive period of a woman's life; that it so frequently recurs after curetting; that it is curable always by removal of the ovaries or by radiotherapy—these and a number of other considerations make it almost certain that the causation is to be sought in an endocrinopathy of some sort.

Where women have lived their reproductive lives and the matter of childbearing need not be considered, or is distinctly subordinate to that of health, the indication is clear for radiotherapy. Here we have the most ideal indication for radium in gynecology, for the menstruation can be checked promptly and with a certainty.

ENDOCERVICITIS

Endocervicitis is a very common pathologic entity in gynecological disorders. The pathology is that of erosion, round cell infiltration, and military abscesses about the glands and connective tissue of the cervix, which seem certain to be more often infected than the corporeal endometrium. Radium, applied properly, will relieve this condition many times, even after the cervix has been repeatedly mahoganized with iodine, as well as many other methods which have failed.

Small doses of radium for a short time will be sufficient to atrophy the glands and correct the condition.

URETHRAL CARUNCLE

Urethral caruncle is a fairly common finding, sometimes giving rise to no symptoms what-

ever and found only on routine examination. Other cases have very definite symptoms. A true caruncle is a benign new growth, often a papilloma, so vascular that it may be confused with an angioma. Twenty five milligrams of radium element placed against the lesion and allowed to remain for 4 to 6 hours usually suffices to produce a reaction and a resulting disappearance of the growth. When thoroughly treated there will be no return.

The radium technique in all uterine cases where indicated consists of insertion of the radium tube, with proper screens, into the uterine cavity, packing the cervix and vagina with gauze and allowing it to remain the proper time. The patient is kept in bed and the bladder emptied frequently, by catheter if necessary. The results are quite certain and prompt.

During the last few years radiation, either X-ray or radium ray, has been established as accurate, legitimate and without accompanying penalties, when applied by the clinician who knows the requirements and limitations of the patient.

Lathrop Building.

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DISCUSSION

DR. T. J. BEATTIE, Kansas City: I cannot let this paper go by without saying something in reference to it. It is very evident that the pendulum is gradually swinging to the other extreme. A few years ago, especially in childbearing women, they were using the curette. Today they use the curette very little. I think the curette is sometimes quite a valuable instrument. But I think the use of radium is, except in the hands of the most careful worker, one of the most dangerous things you can use, or that you can give to the general practitioners to use, or even to the X-ray or radium men to use; and why? Remember, whenever a woman has a hemorrhage from the uterus, nine times out of ten it is due to one or four causes: (1) a growth of some kind; (2) connected with pregnancy; (3) soft, spongy condition of the endometrium; (4) malignancy.

Now you have got to eliminate those things before you can think of instituting any special treatment. Usually those cases of fibroid tumors that cause hemorrhages infringe upon the uterine mucous membrane. If you use radium in the childbearing period (and the Doctor says to use it about twelve hours) even though he may be a radium expert who introduces it into the endometrium for the space of twelve hours he doesn't know what that radium is doing. And we should think more of the women who might afterward want to bear children than we should of trying to stop that hemorrhage with means that might prevent future chances of conception.

DR. H. S. CROSSEN, St. Louis: Just a word of warning, I think, ought to be said in connection with the use of radium in the childbearing period. I am sorry I did not get in to hear the first part of this paper as, possibly, that point was covered. In the use of radium for checking bleeding in uterine con-

ditions, the effect is largely on the ovary. That means that it hinders the ovarian function and it is very difficult to determine just how far to go with it. That is where the danger comes in the use of radium on women in the childbearing period. The exceptional cases that the speaker mentions are well handled by radium. However, in using radium to check bleeding and menstruation temporarily, there is always the danger of checking menstruation permanently. Hence in those cases every other measure should be tried before resorting to radium.

NEUROLOGICAL ASPECT OF PERNICIOUS ANEMIA, RECORDING A NEW THEORY REGARDING THE ETIOLOGY*

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The title of this discussion covers a disease somewhat uncommon yet frequent enough to make it necessary that every physician should have some knowledge of the essential manifestations. The clinical and pathological findings warrant a division into three certain, distinct groups. This would include data from the studies of the alimentary tract, the blood and the entire nervous system. Each group is exceedingly significant. A brief resumé of some important facts relative to the first two will be considered. The bulk of our discussion will center around the neurological aspect.

There are two outstanding signs to be looked for in the observations on the alimentary tract. (1.) Achlorhydria is stated to be present in nearly 100 per cent. of the cases and can be found in a very early stage. Some instances are reported where the hydrochloric acid was absent in the gastric secretion many years before other symptoms appeared. (2.) An atrophy of the papillae of the tongue results in the characteristic, smooth, glistening appearance of that organ. This so called glossitis, too, may be seen quite early.

The blood picture of pernicious anemia probably is better known among medical men than the alimentary or neural group of manifestations. The high color index for a long time has been recognized as exceedingly valuable for making a positive diagnosis. Dr. Russel Haden has convinced me that the volume index is more accurate. Poikilocytosis, microcytes, macrocytes, and embryonal types of red blood corpuscles are found frequently. The characteristic lemon tint color of the skin and mucous surfaces, so frequently seen, results from the blood changes.

Neurological. Clinical and pathologic stud-

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ies in the neurological sphere would suggest a division of three groups. (1.) Those referable to the spinal cord are the best known and many bibliographic references may be found dating from Lichtheim's first report in 1887. Frequent reference is made to the term, subacute combined sclerosis of the spinal cord. (2.) Peripheral nerve and root changes are considered by some as being frequent and by others as infrequent. (3.) Mental manifestations and morbid anatomical changes in the brain are present in many cases, but are not so striking compared with those of the spinal cord.

We might adopt one of two methods in describing the neural manifestations as evidenced in subacute combined sclerosis of the spinal cord. One is to consider the symptoms as described by the patient and the objective findings, the other to describe the clinical manifestations in terms of pathology according to the various degenerations or other morbid changes in the spinal cord.

In a very early stage the patient may complain of tingling and numbness in the fingers and feet. However, frequently at this time there will be found by careful sensory tests no disturbance of epicritic or protopathic sensibilities. These symptoms usually increase slowly. Various paresthesias may develop gradually. As a rule there is a slow extension of these symptoms towards the trunk, practically always beginning in the extreme peripheral parts, such as the toes or fingers. Various degrees of anesthesia and analgesia, loss of joint and deep muscle sensibility, vibration and thermal sense progress with fluctuations in the course. Occasionally the delayed sensation as seen frequently in *tabes dorsalis* may be demonstrated. Hyperesthesia is found infrequently. Even a syndrome resembling that of *syringomyelia* has been reported for an assured case of combined sclerosis in pernicious anemia.

A study of the deep reflexes is not always of value for a differential diagnosis. Wide variations are encountered ranging from the normal to states with various degrees of exaggeration even with fully sustained clonus of the foot or patella. They may disappear entirely which is more likely to occur in the late stages. The abdominals, scrotal, cremasteric, and bulbocavernosus are diminished or lost less frequently.

Various types of incoordination involving sooner and to a greater degree the lower extremities are observed frequently and early. It may appear to be the same as in *tabes*, or simulate more the cerebellar type. Some *Rombergism* may be established in a few cases.

Gross motor weakness does not appear early as a rule, but is common in the late stage. Usually the involvement is extensive. Paralysis

most frequently are of the spastic type. A flaccid neuromuscular state is a possibility. During the early period of a paraplegia usually we can recognize an ataxic-paraplegic gait. This depends upon definite pathological alterations in the cord, represented clinically by an impaired sense of position, a cerebellar type of ataxia and a true motor weakness, due respectively to degenerations in the posterior column, spinocerebellar and corticospinal pathways. We find the earliest weakness and the later increasing motor impairment to involve more severely the distal muscles of the extremities, such as those controlling foot or hand movements. This corresponds to the distribution of the sensory disturbance. Some muscular atrophy has been observed where the paralyzes were marked.

The pathological changes in the spinal cord frequently are striking. However, there is not always a parallelism between the morbid microscopical findings and the clinical manifestations. There have been some autopsy reports with no changes in the spinal cord, and where previously there had been reported definite signs of disturbances in the sensory sphere and incoordinations. It is difficult to determine the reason for this difference. Possibly proper staining methods were not employed. Again minute changes might not have been recognized or demonstrated by the preparations used. A funicular degeneration especially of the central portion of the posterior columns, the spinocerebellar pathways and crossed pyramidal tracts are described. In more severe cases degenerations in the *spinotectalis* et *thalamicus* may be seen. Degenerations are found less frequently in the anterior columns close to the median sulcus. Never are the short association pathways, found bordering on all of the gray substance, involved. Likewise the gray substance is an area where pathological changes are not to be expected. A few exceptions are reported where the anterior horn cells showed mild degenerations. Vacuolization in the white substance involved may be seen frequently. Possibly this is the result of previous minute hemorrhages. All of the degenerations described tend to occur frequently in spots. There is an increase in the neuroglia tissues to replace the destroyed parenchymatous elements. Perhaps this gliosis is not so marked compared with that seen in some other diseases of the cord with similar chronic changes. No inflammatory elements are present. Some fatty degenerations, shown by the Marchi stain, have been described in some neuropathological reports.

Neuritis. There is some difference of opinion relative to the frequency of a true neuritis in pernicious anemia. Several men have reported quite a number of cases, some diagnoses

being demonstrated by autopsies. I reported a case from Bell Memorial Hospital about three years ago, where there was definite clinical evidence of a severe parenchymatous neuritis. Where the peripheral nerves are involved with some of the cord degenerations described above, the clinical picture may be somewhat confusing.

An optic neuritis may be seen somewhat infrequently. It may advance to a degree causing complete loss of vision. Retinal hemorrhages too have been described.

Mental. A state of irritability and instability may be noted frequently in pernicious anemia. Defective memory and impaired cerebration may be determined in many cases especially in the late stage. Occasionally more severe psychoses are present. The patient can become disorientated, have confusion, or even delusional states. Epileptiform attacks have been described. Possibly some of the cerebral manifestations might result from the severe anemia alone. However, pathological changes in the tissues of the brain have been reported. They are never so striking compared with those found in the spinal cord.

Prognosis. The grave prognosis in general for pernicious anemia is quite well known. For those cases with a marked neural syndrome, it is even worse. Even the remissions are fewer and shorter where the nervous system is involved. Nevertheless a few cases with good respites have been reported.

Treatment. The treatment for the neural type of pernicious anemia is not very different from that in general. Usually neurological involvements are recognized late which adds to the seriousness of the situation. Appropriate symptomatic therapy is indicated. Fowler's solution, using 3 to 10 drops administered two or three times a day, is a favorite. Sodium cacodylate is considered by some physicians as a superior arsenical preparation for pernicious anemia; 1 to 3 grains (0.06 to 0.18 grams) may be given subcutaneously twice a week. Arsenobenzol has been advocated.

It is generally conceded that blood transfusions do not cure pernicious anemia. However, many favorable results are reported, even though the improvements have been short lived. This method of treatment has not been of much value for the neural types.

Splenectomy in its final analysis is not attractive. It has been given an adequate trial. Lately some operative work on the intestinal tract has been advocated.

Etiology. Up to the present time there has existed a great deal of uncertainty relative to the cause of pernicious anemia. Possibly we might have expected better progress in the treatment during the past few decades, if there had been more knowledge about the etiology.

Various infectious diseases, including influenza, scarlet fever, typhoid, enteric disorders, malaria and syphilis, have been named as possible factors. The spleen was accused of being the offending organ. A special lipid substance found chiefly in the ileum was designated. The focal infection theory has been searched.

For some time our attention has been directed to an intoxication from the intestinal tract, possibly a disturbance in metabolism or abnormalities related to the flora within. As far as I am aware no animal experimentation has proven any of these contentions.

I wish to propose a theory which could explain the cause of pernicious anemia. It has existed in my mind for a number of years, but has never been discussed before a scientific assembly nor recorded in any medical journal.

First your attention will be called to a few salient facts. Pernicious anemia exists chiefly in the fifth and sixth decades of life. That it is considered usually as a chronic, progressive and fatal disease. That our observations and recorded knowledge of the very earliest stage may be quite deficient. That the pathological reports deal chiefly with terminal states. That the initial deviations from the normal may be confined to the field of physiology. That three great anatomical systems of the body are concerned in the symptomatology and terminal morbid changes, namely, the blood stream with its hemopoietic organs, alimentary tract and nervous system. Probably each one or all are involved during some portion of the course of the illness in over 90 per cent. of the cases. That the vegetative nervous system is the only nerve supply to the stomach and intestines, including especially the digestive secretory glands, and the circulatory organs. The parenchymatous portions of the brain and spinal cord are not innervated, but their vascular organs are supplied by this same vegetative system.

I would conclude that pernicious anemia has its origin in some deviation from the normal in the vegetative nervous system. The derangement may be purely physiological for an early period. This could account for the early defect in the secretions of the alimentary tract, especially the achylia and achlorhydria, and secondary atrophic states found later in the secretory glands. Following this there would appear abnormal changes in the intestinal flora and the formation of various toxins. These chemical products elaborated in the intestinal tract may be absorbed slowly into the circulation and insidiously produce the profound anatomical changes in the spinal cord and brain, peripheral nerves, blood and bone marrow.

Of the three great prevertebral plexuses in the chain of the vegetative nervous system, our

attention might be focused on the solar plexus for an impaired function. Even anatomical changes are not impossible. The solar plexus with its many small branches and terminal plexuses around the aorta and its smaller vessels, innervates the abdominal viscera. The other two, cardiac and hypogastric, are not as attractive when searching for the source of the earliest trouble.

Anxiety and worries regarding problems of life together with an age of declining functions with slow tissue decadency should engage our attention. After these conditions have been attendant over a long period the continuous insult could be registered in the three prominent plexuses of the vegetative nervous system. The solar, also termed celiac, epigastric and abdominal aortic, concerns this problem chiefly. We are not unmindful of some brilliant physiological experimentations reported showing the effect of emotional states on digestion. Secretions in the stomachs of cats and dogs have been checked completely at any stage by the introduction of factors of annoyance and fear.

IMMUNITY*

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Immunity from disease and how to secure it is a problem that began with the first man, continues to the present, and will continue for the future. When we consider the helplessness of the babe, the rashness of youth, and all the ways in which an adult may lose his life, we wonder how man has ever survived. Some of the old plagues and scourges, black death and other epidemics that have visited the world from time to time, nearly succeeded in wiping out mankind. Even in this day when we get conceited enough to think we have all diseases fairly well under control, an epidemic like influenza comes along, or we get a case of acute sepsis of some kind, which makes us realize how little we really know and how helpless we are.

Don't think from this that I am a pessimist for I am far from it. We are now in the most satisfactory age of any from the physician's stand point, and the prospects are so bright that I often wish I was just beginning my medical career.

I am not bringing you any thing new about immunity, but it does all of us good, once in a while, to sit down together and consider some of these vital questions; such as why, when several persons are exposed to a disease, one is not affected at all, another will become seri-

ously sick and get well, and yet another will die from it; or why one race or nation is more susceptible to one disease than another; or why certain occupations are more dangerous than others. This brings up the question of idiosyncrasy to drugs and certain foods, susceptibility, resistance, tolerance, etc. Immunity just resolves itself into the old battle between life and death and why sometimes one wins, and sometimes the other.

The ancients recognized that many diseases rendered the patient immune to that particular disease, but made no practical application of the observation. Among the first laws and rules of hygiene of any value were those laid down by Moses, which probably helps to account for the virility and surviving ability of the Jews. The Chinaman is not such a "Dumb Dora" when he employs his physician to keep him well. The Chinese and natives of East India practiced variolation as early as the eleventh century. But modern preventive medicine began with Jenner and his smallpox vaccination.

This is such an immense subject that I hardly know where to touch it, but we will consider some of the theories of immunity and the practical application of them.

The ancients had what they called the humoral theory, and in a way it has been revived. Nothing much was added until 1878 when Koch thought it due to some variation in the condition of the blood. Then came Pasteur's exhaustion theory, and many others, but the first experimentally substantiated theory was Metchnikoff's phagocytic theory.

Does history give us the account of any battle as thrilling as that of the phagocytes? The defense of the Pass of Thermopylae when Leonidas with his 300 Spartans defended the pass from the Persian horde, pales into insignificance when compared to the faithful leucocytes battling against the millions of bacteria, which can raise, equip, and put into battle line a new army every day.

Then there was Ehrlich, with his side chain theory, with his amboceptors and antigens. Then other investigators introduced such terms, as alexin, opsonin, lysin, antibodies, agglutinins, precipitins, tropins, etc. Ehrlich considered it a purely chemical reaction, like a strong base uniting with a strong acid, but Bordet claims that it is a physicochemical reaction. Gay sums it up thus: "In natural immunity the plasma contains a weak sensitizer or opsonin which combines with bacterium and renders it more attractive for the phagocyte. In acquired immunity the plasma contains strong sensitizer or tropin which makes both engulfing and destruction of bacterium by alexin within the phagocyte rapid."

* Read before Lafayette County Medical Society, April 20, 1926.

In simple language, in immunity, whether natural or acquired, there exists in the blood plasma some bactericidal agent, call it what you may, which helps to neutralize the poison produced by the bacteria and also to render the invading bacteria easier for the leucocyte to destroy.

The application, of the principles of immunology in the diagnosis, prevention, and treatment of infectious diseases has been the most inspiring work in medicine in the past fifty years. Whereas there have been some very brilliant and definite results, there has also been a great tendency to exploitation and injudicious enthusiasm.

In 1798 Jenner noted that milkmaids frequently acquired pustules on their hands in milking cows infected with cowpox, and he further noticed that these same maids failed to develop smallpox when exposed to it and this, with his practical application in vaccination, started modern preventive medicine. Then elapsed nearly 100 years without much further advance until 1879 when Pasteur did his famous work on chicken cholera, rapidly followed by that on the silkworm disease, wine and beer ferments, anthrax and rabies.

I think the one thing that had the greatest influence in deciding me to study medicine was Pasteur's brilliant experiment with anthrax and his attenuated virus for it. I will briefly relate the story. Anthrax was prevalent all over Europe, becoming very serious to the cattle industry. You recall how he took a hundred head, consisting of cows, sheep, and goats, and divided them equally, all fed on the same food and treated exactly alike, except that fifty were inoculated with his attenuated virus against anthrax and the other fifty were not. Then all were infected with anthrax. When, lo and behold, in due time all the unvaccinated animals died but none of the others even became sick. You can well realize what a triumph that must have been, and what a far reaching influence it had.

This started an army of investigators—Lord Lister to work on antiseptics, Roux and Behring on antitoxin for diphtheria, Ross and others on malaria, Reed and his collaborators on yellow fever, and many others.

When thirteen years old I was in bed three months with typhoid fever, and during that time a virulent epidemic of diphtheria hit our community and my own family, with a mortality of about fifty per cent. It is a much different story now with both diseases. When I first started the practice of medicine a large part of my revenue was derived from treating typhoid; now I rarely ever see a case, though I had a case last fall from South Dakota.

Statistics for the City of New York show in

1885 and prior thereto forty deaths per 100,000 population from typhoid, and in 1924 two deaths per 100,000 population from typhoid. For diphtheria before antitoxin 15.19 deaths per 10,000 population but after antitoxin 6.62 per 10,000 population. The statistics for tetanus are even better. I will not tire you with statistics, but wish to call attention once more to the fact that from the principles of immunology we get valuable aid, viz: (1.) In diagnosing; typhoid, paratyphoid, Malta fever and relapsing fever, in syphilis, tuberculosis, hay fever, food allergy, and so on. (2.) In the prevention and treatment: of smallpox typhoid, paratyphoid, bubonic plague, Asiatic cholera, rabies, diphtheria, tetanus, and to a less extent in scarlet fever, certain types of pneumonia and other respiratory infections.

I have had an excellent opportunity to apply the principles of immunology in my service at Wentworth Military Academy.

Each cadet on entering school receives a complete physical examination, primarily to discover any defects, such as diseased tonsils, enlarged lymphatics, hernia, heart lesion, tuberculosis, or other defects, for the purpose of regulating his scholastic and military duties.

In this way we occasionally find a case of impetigo, scabies, purulent conjunctivitis, trachoma, or other contagious trouble, which is immediately isolated and treated. Then all boys who have not been inoculated against typhoid within two years, are given the complete inoculation for typhoid and paratyphoid, just as is done in the United States Army. We also vaccinate against smallpox, all who haven't good recent scars.

Sick call is held each morning at eight o'clock, to give each cadet in my unit an opportunity to receive proper attention for any ailment whether genuine or imaginary.

In this manner we are often able to detect some serious condition in its incipency, and by prompt action abort the condition or prevent a serious complication that might otherwise develop. In this work I have had the hearty cooperation of the academy officials and valuable assistance of a very competent trained nurse.

Will you permit a few digressions from the main subject, but suggested to me by it.

When the big game hunter, the explorer and the archeologist go into tropical countries they do not fear the lion, tiger, elephant, buffalo, and even the venomous snake as much as they do the mosquito, flea, tick, and fly. But thanks to modern medicine they know how to equip for protection from them. Modern medicine has also made possible such immense undertakings as the Panama Canal and is rendering the waste places of the earth habitable.

Are we not largely responsible for all the pseudomedical cults. If we give people something besides so many pills or so much surgery, do you think they would need Christian-lack of Science or the chiropractor. Let us not neglect our golden opportunity for a little needed advice, whether it be hygienic, social, or spiritual. One of the finest tributes I have read for sometime was that to Dr. Charles Wilson, who recently died in Kansas City. His men, "soldiers and firemen, loved him because they could go to him as easily with a sick soul as with a sore finger."

In conclusion. When God created man to be lord over all creation, he equipped him with a wonderful defensive system against disease. In the way of outposts there is the skin, mucous membrane and lymphatic system; for internal defense, we have the leucocyte and blood plasma in addition to the marvelous work carried on by the lungs, circulation, alimentary and genito-urinary system, all under control of the central nervous system.

The study of immunity challenges our imagination and very best thought and whenever you help an individual to develop his defensive system and put him on the road to health, you have done a good deed and increased the sum of human happiness.

SHOULD OPTOMETRISTS BE RECOGNIZED BY THE MEDICAL PROFESSION?

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Some time ago the Missouri optometrists made application for legal recognition of their craft for the purpose of sight testing, in which they have succeeded. It is consequent upon these efforts that the Council of the American Medical Association thought it desirable to consider the matter in the interest of the public. In their petition the optometrists presented the following argument:

In a very large majority of refraction cases which can be treated by glasses, the public visits the optometrist rather than an ophthalmic surgeon or medical man and the Optometry Association humbly submits that it is eminent to the public interest that the optometrist should be a skilled man and under suitable supervision. A qualified optometrist, especially when holding fellowship in the association, would recognize a case in which the eye, through disease or otherwise, could not be properly treated by glasses and would direct the patient to an ophthalmic surgeon or medical man. An ignorant optometrist would be likely to supply the patient with glasses which might do great harm.

The optometrist's standpoint is described by the Council as covering an endeavor to supply spectacles with which the customer considers he

can see to his liking, or to provide such lenses as will convert optically imperfect eyes into accurately focusing instruments. All are agreed that the former procedure is indefensible; the latter needs further consideration.

The eye is an integral part of the human body. It is essentially an offshoot of the brain. There is practically no organ of the body which does not react upon it to its advantage or to its detriment. Without exposing it to the gravest misfortune it cannot be dealt with as an inert, isolated instrument. Yet, it is in this way only that the optometrist can view it, and in this way only can he adopt mechanical apparatus to such of its optical defects as his limited means may enable him to recognize. Without the use of drugs to dilate the pupil or paralyze the focusing muscle, in many cases, he cannot measure accurately the error of refraction or be in a position to identify the cases which demand medical advice and treatment. If he were allowed to use such drugs he would become an even greater danger to the community by reason of serious disease which in his ignorance he might produce.

It is admitted that in many cases an optometrist may be successful in raising the acuteness of vision to a normal standard, but he would almost invariably fail to recognize a disease which was causing the refractive error. Furthermore, diseases, very serious to the eye or even threatening life, may exist in an eye during acuity of central vision. Changes in the refraction of the eye are often produced in the early stages of eye disease. For example, myopia often appears in the early stages of cataract or chronic glaucoma, the latter a disease which, untreated, inevitably leads to blindness. Hypermetropia may be met with in the early stages of malignant intra-ocular tumor. In such cases glasses might bring the visual acuity to normal but the optometrist would have failed to recognize the disease, leaving it to run its course. Optical defects and disease constantly overlap; the former cannot be differentiated with certainty from the latter, nor the latter definitely excluded by any but a medical practitioner who has had special training and experience.

The significance of a routine examination of the eye ground is important. The first essential to an adequate understanding of an examination of the ocular fundus lies in an acquaintance with the use of the ophthalmoscope and familiarity with the appearance of the normal fundus. A complete physical examination should contain data concerning the clearness of the cornea and the promptness of the pupillary reflexes and all the refractive media. Only a few minutes more are required to test visual acuity and peripheral visual function. A great deal of care should be exercised in the interpre-

tation of visible changes in the vessels of the retina. One should carefully note the changes that occur in the vessels due to arteriosclerosis, nephritis and disease of the blood. It is particularly important that one suffering from high blood pressure, disorders of the blood, kidney or liver, headache or disease of an obscure origin, should be carefully examined with regard to the function of the cranial nerves which supply the region of the eye and the ocular fundus. There is also a close connection between the eye and its relation to internal medicine. Many obscure constitutional troubles present ocular involvements the appreciation of which assists greatly in a diagnosis of the disease. Much permanent damage is done to sight by failure to observe eye complications. Various structural diseases as well as functional disorders are due to dental infection, such as pyorrhea and abscess of the roots of the teeth. Infected tonsils may cause a large and varied list of obstinate ocular affections.

A man who pretends to fit glasses can never do justice unless he is a physician who practiced medicine for a number of years before taking up special work on the eye. To be a specialist a man must have a great deal of training. He has to take postgraduate courses under good men, and should have clinical experience.

If a man takes up, for example, the science of refraction and diseases of the eye he should be prepared with a knowledge of diseases in general. Through the routine examination of an eye for glasses he quite often comes in contact with conditions in the eye demonstrating some ailment in the remote parts of the body. Right there and then is the obligation of the specialist to call the patient's attention to his ailment; right there and then the question of fitting glasses for the patient ends. The glasses are not going to cure the diseased eye. The cause has to be removed first and nature will take care of the diseased eye. It is amazing to see how many people will apply for eyeglasses who, through a diligent examination, are found to be afflicted with some constitutional trouble causing impaired eyesight. From the above it is evident that not always will eyeglasses remove the diminution of vision if the cause it not looked into and removed.

A good many people have been mistreated that way. People have been fitted with glasses when they needed medical attention; others, even with cataracts, were fitted with glasses which were of no value as far as a cure was concerned. I have seen persons fitted with a pair of spectacles containing ordinary window glass when they really needed medical attention, but they wear the window glass with the

hope of obtaining a cure, causing the disease to enter into a chronic condition in which medical aid can no longer help them.

Now then, should a general practitioner trust his patients to an untrained optometrist to diagnose in confirmation of his general findings? Then, again, does not the ophthalmic surgeon refer cases to the internist when he finds lesions in the fundus indicating some constitutional trouble?

The general practitioners should be warned in selecting men for the examination of their patients because that involves their reputation.

It is pointed out here, there and everywhere that it cannot be to the interest of the community to allow such grave responsibility to pass into the hands of men with no medical training and the official recognition of a practice involving such a danger.

REINFECTION IN SYPHILIS

A study was made by James Russell Driver, Cleveland (*Journal A. M. A.*, Nov. 29, 1924), of thirteen cases of reinfection with syphilis seen among approximately 5,000 syphilitic patients. Outside of one old syphilitic patient who had been infected seven years before, all of this group of reinfection were patients diagnosed while still in the primary, or perhaps better still, the early stage of the disease. The patients reported at the following number of weeks after the exposure: 3, 3, 3, 4, 4½, 5, 7, 7, 8, 10, 12 and 12. These thirteen cases of syphilitic reinfection satisfy quite closely the requirements laid down to constitute a true infection. A diagnosis was made in twelve of these cases and treatment started at extremes of from three to twelve weeks, with a median of six and one-half weeks after exposure. Only one old syphilitic patient was treated. In his case, treatment was instituted seven years after infection. These patients, on an average, received from six to twenty-four injections of arphenamin, with a median of twelve injections, and from fifteen to fifty mercuric salicylate injections, with a median of twenty-five injections, in order to render them bacteriologically free from spirochetes and in a position to get a new syphilitic infection. No hard and fast rule is laid down as to the amount of treatment necessary to cure a case of syphilis. Each case is one unto itself, but in this series of early diagnosed syphilitic cases, the foregoing treatment was apparently sufficient. The period of time that intervened between the first and the second infection varies from one month to 120 months, with a median of fifteen months. I believe that this indicates that the first syphilitic infection confers no immunity on its host for any period afterward. As soon as he is free from the first infection, he is open to another one, if exposed. From reports of others and from this series, I believe that the curability of syphilis is definitely possible, provided: (a) an early diagnosis can be made by the dark field, and (b) early, amin and mercury injections. With modern vigorous treatment can be instituted with arsphenotherapy, syphilitic reinfection is probably more frequent than we suspect, and if more syphilitic patients could be closely followed over a period of years, such would be found to be the case.

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EDITORIALS

MEDICAL RELIEF IN DISASTER

A commendable plan for the immediate relief of persons injured in disasters was adopted by the American Medical Association at the Dallas meeting last May. This plan has been submitted to all state associations and component county medical societies and several of our county societies have adopted the plan and are ready to function. This is a movement that every component society should approve for certainly no organization is so important and necessary in times of disaster as the county and state medical societies. They are fully equipped to respond without the loss of a single precious hour to the call for physicians, nurses and supplies needed at the scene of any disaster in the county when other organized assistance is not immediately available. We commend the proposition submitted by the American Medical Association to every component society for consideration and adoption. The plan is explained in detail in the following report of the committee of the American Medical Association:

REPORT OF COMMITTEE ON MEDICAL RELIEF IN DISASTER

This is an outline of a plan for immediate medical relief, by the American Medical Association in cases of disaster.

The reason for suggesting this is the confusion and often breakdown that occurs immediately after any large disaster, before the established state and national organizations which properly take charge of such situations arrive on the scene. This immediate difficulty is due largely to the fact that, except in the larger centers, there is apt to be no organization or individual with any authority for taking charge of these situations and directing the immediate work of medical relief. The suggestion of this plan has been made by medical officers of disaster relief of the American Red Cross with the hope that through it these immediate difficulties can be overcome and that cooperation with the Red Cross can be made more effective.

The purpose is to provide an organization that can immediately function in the case of disaster by reason of its having a medical man designated in each county of the country who shall be deputized by the American Medical Association to act at once in organizing and directing immediate medical relief. He is to assume direction of medical relief until the properly constituted authorities or other recognized state or national organizations arrive and assume

charge. It is not intended that this organization shall take permanent charge or that it shall take over the functions of the bodies provided by the state and federal governments, including the Red Cross. Its function is primarily to furnish immediate medical relief in the interval before the usual organizations arrive. After their arrival, this organization is expected to put itself under their direction or control or cease to function, except in the unlooked for situation where the organizations properly looked to so fail to meet their obligations that independent action is necessary to prevent suffering. It is to be hoped, and it is our expectation, that this organization will be able to cooperate both before and after their arrival with the state and federal organizations for relief, and with the Red Cross.

It is not its function to take charge of railroad disasters or of any other sort of industrial disasters where the corporation involved has its own organization to act immediately in these disasters. The function of this organization, in short, is not to take over medical relief in situations in which organized machinery to take care immediately of disasters already exists. Its purpose is to provoke systematic direction for relief only in those situations in which, for the time being, no adequate organizations exists for performing this function.

The plan particularly has in mind disasters of such magnitude that they temporarily break down the ordinary machinery of the community for medical relief and call for the sudden mobilization of the medical profession of the community in order to cope with unexpected situations. The necessity for this may arise in a city as well as in a small community.

The essential thing in such a plan is that there should exist potential machinery that can immediately be called on to act in the event of disaster. Disasters such as would call on this organization are fortunately so rare that any special organization that existed for this purpose alone would be very difficult to keep alive because of lack of demand for its services. It would seem, therefore, that the best plan would be to attach this function of disaster relief in each community to one of the regular officers of the constituent societies of the state medical associations. The officers on whom it would seem best to put this responsibility are the presidents of the local societies. They are representative men in their towns and counties, are chosen heads of the profession and, in the nature of things, have its confidence.

The plan, then, would be that the American Medical Association should direct that immediate supervision of medical relief, until taken over by the proper organizations, should be a function of its officers as follows:

In counties: the president of the county medical society. Where more than one county is represented in a single medical society, the director of disaster relief should be the president of this society.

The state director of disaster relief should be the president of the state society.

The national representative of the American Medical Association for disaster relief, it would seem, should be some one who is in the headquarters of the American Medical Association and, who, therefore, could always be reached promptly. And it would seem that the proper officer to represent the Association as director of disaster relief should be the general manager or secretary of the Association, who should act, as far as possible, with the aid and advice of the President of the Association.

The functions of the county or local director of

disaster relief would be to assume charge—act as captain—in systematizing, directing and controlling activities in immediate medical relief. He should feel that he is responsible for the direction not only of the local members of the profession but also of volunteers who come in. The great difficulty in these situations is that no one under present conditions feels that he can with propriety assume direction. Under this plan the president of the county medical society not only could with propriety assume direction but should be expected to do so by the members of the profession.

The president of the county or district society should be allowed, if he wishes, to deputize the direction of relief to another member of the profession of his choice. If he does this it should be done formally and publicly, and this action should give his deputy full authority to act in his place.

The functions of the president of the state medical society as state director should be to see that the presidents of the county societies live up to their responsibilities, to cooperate with them in every way possible, and to act as a central officer through whom, in necessity, the national director of medical relief in disaster or any outside organization could take up matters, particularly matters that they desired to bring to the notice of the members of the profession as a whole.

The national director of medical disaster relief should have functions similar to those of the state directors for the country as a whole.

The Secretary of the General Manager of the Association as national director and the presidents of the state societies as state directors should be liaison officers between the national headquarters of the Association, state headquarters and the component county societies.

An immediate function of theirs, in case this plan is adopted, would be to see to it that the presidents of the local societies and the profession of the country become acquainted with this plan of organization, and that in the event of disaster the president of the local society is to be looked to as the director in charge of medical relief until the proper authorities appear to take control.

This information should not only be given on the adoption of the plan, but should be repeated from time to time, until the plan becomes a tradition and in disaster the profession and the public come naturally to expect the president of the county medical society to take immediate charge and to expect the medical profession to act under his direction as long as the immediate necessity exists. To this end, information of this plan should be promulgated repeatedly through *The Journal of the American Medical Association*, through the *American Medical Association Bulletin*, through the state medical journals and societies, and by such other means as may be effective.

WILLIAM ALLEN PUSEY,
W. D. HAGGARD,
WENDELL C. PHILLIPS.

STREET AND HIGHWAY SAFETY

An important conference on street and highway safety was held in Jefferson City, May 10, 11, and an organization called the "Missouri Conference on Street and Highway Safety" was formed to function in conjunction with the National Conference on Street and Highway

Safety. At the meeting of the National Conference held in Washington, D. C., last March 46 states were officially represented by appointments of the governors of the states.

The Washington Conference stressed the value of uniform traffic laws and regulations throughout the country. After months of study and careful deliberation a uniform vehicle code has been recommended for adoption in the 48 states. This vehicle code has been divided into the following sections: (1) A uniform motor vehicle registration and certificate of title act. (2) A uniform law regulating the operation of vehicles on the highways. (3) A uniform operators' and chauffeurs' license law.

The Missouri Conference endorsed the work of the National Conference and approved the proposition for the establishment of uniform vehicle laws throughout the country, the importance of which is apparent to every thinking person. Those who have given great study to the safety problem believe it can best be solved through (1) education; (2) good laws; (3) strict enforcement of these laws; (4) vigorous prosecution of offenders; (5) engineering and city planning research work.

The Missouri Conference will draft laws and amendments to existing statutes for introduction in the next session of the legislature and they desire the cooperation of our members. They have invited our Association to be represented in the conference and assist in drafting these bills and otherwise doing what we can to promote safety on the streets and highways in the state. We feel sure that our members will co-operate in this highly necessary movement so that there shall be fewer accidents from automobile traffic and a reduction in the number of fatalities. Mr. Royce B. Hinkle, State Labor Commissioner, Jefferson City, is Chairman of the Missouri Conference.

DR. RUSSELL D. CARMAN

An Appreciation

The record of one's passing is written for one of two reasons: the first, to make a record of birth, achievement, and death; the second, to relieve a heart that is torn and saddened by the passing.

It was my good fortune to know Doctor Russell D. Carman for more than twenty-five years. We met for the first time while we were senior students, he at Marion-Simms, I at Beaumont.

After graduation, both of us remained in St. Louis. I met him frequently while he was

practicing at 4300 Olive street with Dr. Casey Witherspoon. There was a great triumvirate in those days—Carman, Witherspoon, and Crandall. Crandall was the first to go, dying young and at the zenith of his career. Witherspoon left St. Louis and Carman was by himself here several years before he went to the Mayo Clinic at Rochester.

Nature, seemingly, was most kind to Doctor Carman. She gave him the face of an Apollo, the physique of a Greek god, a heart as gentle, kind, and fine as that of a child, and a mind colossal in its ability to achieve; and then She struck him down without pity or remorse.

I have tried to find an answer to the question, "Why do the good die young?" but an answer, if there is one, has never been winged back to me. It was my great pleasure to know Jack London and to see the good work he was doing by the spoken and the written word, and I saw him die at the age of forty-one, stricken down in a day. That Carman's work saved hundreds of lives and relieved thousands, none who knew him and his work will deny, but still he was stricken, seemingly when at his best—but why? Was his work finished? Who can tell? If it was, then his going was kindness itself, for who would remain when his work is done. Hearts bowed with grief sometimes catch at straws. When I see the prison reform that has swept America and the world since London wrote and published *The Star Rover*, an expose of cruelty practiced on prisoners at San Quentin, and know that the effectiveness of this work was increased by his untimely death, I feel that it may be that his work was finished, and his going has less of the sting. It may be, too, that Carman's work was finished. Possibly his tragic death caused by a disease that he had fought so long and earnestly, will serve to impress thousands of physicians and surgeons with the great necessity of an early diagnosis of cancer of the stomach, and perhaps more lives may be saved and more good accomplished than had he lived. It is good to hope, at least, that this will be true.

Fortunate indeed were they who knew Doctor Carman, who came under his influence, who received the touch of inspiration that he alone could give. His passing has made all who to labor, and to love unto the end.—C. V. MOSBY.

THE NEW A. M. A. DIRECTORY

Every member of our Association will want to have his name printed in capital letters in the forthcoming edition of the Directory of the American Medical Association, so that his affiliation with the organization will be ap-

parent to all who consult the Directory. Unfortunately for some of our members the last issue of the Directory went to press with a number of names printed in small letters, because those members had failed to protect their interest by paying their dues in time to entitle them to all the benefits and privileges of membership. We urge every member who has not paid his dues to his county society to do so at once in order that the secretary of the county society may send his state assessments to the State Association Secretary and thereby retain your name in capital letters in the next issue of the Directory.

Every member has received a card from the American Medical Association during the past month or six weeks requesting full data for inclusion in the Directory and asking the correct address of the member. Whether or not you have moved your office or residence during the past two or three years you should answer all the questions printed on the card and return it to the American Medical Association, so that your name and address and all the other information needed for the Directory may be promptly listed.

ANOTHER BUSINESS ADOPTS CODE OF ETHICS

At a recent meeting of the American Retailers Association, held in St. Louis, a written code of ethics to govern the behavior of the members was adopted as a part of the organic laws of the organization. The Association has some 4000 members who operate retail stores in the smaller cities and towns throughout the country.

We have commented on previous occasions on the recognition by business corporations of the beneficial influence that the adoption of principles of ethics has on business life. The Retailer's Association in its code recognizes that "the foundation of business is integrity," and clearly acknowledges the obligation of the retailer to the public, to employees, to competitors and to customers. It urges all its members to conduct their business upon the highest plane.

The recognition by numerous business organizations that success in conducting any undertaking is founded upon integrity, which requires honest and truthful dealings between all parties concerned in any business transaction, is rapidly dissipating the suspicious attitude of the public toward the merchants in general. In former days the expression "business is business" meant in reality that the customers must look out for his own interest and expect to be

misused if they were not smart enough to prevent double dealing on the part of the merchant. Happily, the merchants themselves have done more than anybody else in removing this deplorable mental attitude on the part of the people by the adoption of principles of ethics.

It is too much, of course, to expect adherence to a code by all merchants, but those who deviate from the line of behavior required by the code will soon become known to a community and, as in the professions, they will find themselves properly classified as unworthy of the confidence of the people.

NEWS NOTES

Dr. H. J. Ravold, St. Joseph, and Miss Jesse Gordon, were married July 15.

Dr. E. H. Kessler, St. Louis, who has been compelled to relinquish active work in his specialty during the past few months because of illness, has recovered and is again able to take care of his practice.

Dr. C. S. Austin, Carrollton, has recently purchased a fine farm of 160 acres in the Missouri river bottoms. Dr. Austin now possesses and operates some 1700 acres of agricultural land and handles several herds of cattle, sheep and hogs.

Dr. T. A. Kyner, Kansas City, has recovered from a serious illness that compelled him to give up his practice for a considerable period. After spending several weeks in Colorado, while convalescing, he has returned to Kansas City and resumed his practice.

The Christian Hospital, St. Louis, has been recommended for inclusion in the list of hospitals approved for internship and the fifth year in medicine. The Council on Medical Education and Hospitals of the American Medical Association will act on this recommendation at its meeting in September.

Dr. A. R. McComas, Sturgeon, Chairman of the Council, has been appointed official physician for the American delegation to the Press Congress of the World by the President, Walter Williams, of Columbia, Missouri. The Press Congress will hold its third meeting at Geneva—Lausanne, Switzerland, Sept. 14-18, 1926.

An outline of the program for the next meeting of the Inter State Post Graduate Assembly of North America, has been distributed and as in former meetings discloses a wide variety of topics to interest practically every practitioner, irrespective of his specialty. The meeting will be held in Cleveland, Ohio, October 15 to 22 inclusive. Dr. George W. Crile, Cleveland, is chairman of the program committee.

The 1927 annual meeting of the American Medical Association will be held in Washington, D. C., May 16-20. Reservations for rooms are already being made. Dr. John Allan Talbott, 1621 Connecticut Ave. N. W., Washington, D. C., is Chairman of the Committee on Hotels of the Local Committee of Arrangements and will be glad to assist members and Fellows in securing satisfactory hotel accommodations.

Dr. E. W. Cavaness, City Health Director of Kansas City, has appointed a committee from the medical staff of the General Hospital to investigate the adaptability of the Research Hospital as a connecting unit for the city institution. The proximity of the Research Hospital would make it feasible to connect it with the General Hospital by an underground tunnel. Kansas City recently voted a bond issue of \$1,200,000 for improving the municipal hospital facilities. The Committee appointed by Dr. Cavaness comprises, Dr. Howard Hill, Dr. Jacob Loire, Dr. B. A. Poorman, Dr. G. Wilse Robinson, Dr. Edwin Schorer, Dr. E. H. Skinner, Dr. Geo. H. Mosher.

The following articles have been accepted for New and Nonofficial Remedies:

Armour & Company

Pituitary Liquid (Surgical)—Armour
Ampules Pituitary Liquid (Surgical)—
Armour 1 cc.

Parke, Davis & Company

Pertussis Immunogen
Pneumococcus Immunogen
Silvol Dougies 5 Per Cent
Silvol Ointment 5 Per Cent
Vaginal Suppositories Silvol 5 Per Cent

Powers-Weightman-Rosengarten Company

Calcium Phosphate Tribasic—P. W. R.
Magnesium Phosphate Tribasic—P. W. R.

Nonproprietary Articles

Tribasic Calcium Phosphate
Tribasic Magnesium Phosphate

OBITUARY

EDWARD D. GRIGGS, M.D.

Dr. Edward D. Griggs, Verona, Mo., was a native of Missouri, born at Shelbyville, Shelby County, 1838. At the beginning of the Civil War he enlisted in the Confederate service in the Tenth Missouri Regiment under Gen. Sterling Price, as an assistant surgeon. He later entered the army as First Lieutenant of Co. A in Gen. Parson's command, where he served with honor and distinction until the evacuation of Corinth.

When he came home soon after the war he was married to Miss Mary S. Duvall, of Jefferson County, Mo. To this union were born five sons and one daughter. Dr. Grigg was a member of the Masonic Order, of the Baptist Church and was greatly beloved in his community. He was an untiring worker and gave the people and the profession his best efforts. His whole life was one of sacrifice to his family and the public. He was a true gentleman of the old school. The following resolutions were adopted by the Lawrence-Stone County Medical Society:

WHEREAS, death has again entered the home of our members and taken one to his just reward. A faithful member of our society is gone, and we can bear willing testimony to the sterling integrity and many virtues of Dr. Edward D. Grigg who recently died at his home at Verona, Mo., where he practiced his profession for fifty-five years and where he was well known for his devotion to his family, his country and our society. We can commend his example as one worthy of emulation. Therefore be it

Resolved, That in the death of Dr. Grigg his family have lost a devoted father, this Society a faithful and zealous member and his community an honored and upright citizen.

Resolved, That a page in our records be dedicated to his memory and a copy of these resolutions be furnished his family.

F. S. STEVENSON,

D. C. ADAMS,

J. W. SMITH,

Committee.

HENRY E. PARK, M.D.

Dr. Henry E. Park, Knobnoster, a graduate of the Barnes Medical School, 1893, died at his home July 2, aged 68 years. Dr. Park was one of the best known physicians in Johnson County and was most highly esteemed and respected not only by his fellow physicians, but

by all who knew him. Before studying medicine Dr. Park taught school in which profession he was very successful. He was the honor member of his class at the Barnes Medical School, receiving the gold medal. Throughout his entire career, Dr. Park demonstrated his ability to apply the knowledge he gained in his medical studies and was regarded by all as possessed of sound judgment and great skill in the treatment of diseases. He served as President of the Johnson County Medical Society and was coroner of Johnson county for a short term.

The passing of Dr. Park removes from our midst a highminded physician and deprives the people in his community of one who gave himself without stint or thought of personal convenience to the relief of those who were suffering from diseases.

HENRY MILTON WHELPLEY, M.D.

Dr. Henry M. Whelpley, St. Louis, Dean of the St. Louis College of Pharmacy, a graduate of the Washington University Medical School, 1890, Secretary of the United States Pharmacopeial Convention since 1910 and a noted collector of Indian relics, died in Argentine, Kansas, July 26, 1926, aged 65 years.

Dr. Whelpley's collection of relics of the American Indian and the Mound Builders was one of the most celebrated in the United States and archaeologists came from all over the country to study his remarkable specimens. He was a member and one time president of the St. Louis Academy of Science, a member of the Board of Control of the Missouri Historical Society, a member of the St. Louis Medical Society, Fellow of the American Medical Association and affiliated with numerous pharmaceutical and other scientific organizations.

Since 1888 he was editor of the Meyer Brother's Druggist and he edited the National Druggist for three years previous to taking charge of the Meyer Brother's Druggist.

ANTHONY LEO LUTZ, M.D.

Dr. Anthony L. Lutz, St. Louis, a graduate of the Washington University Medical School, 1912, died July 4, at Carthage, Missouri, where he had gone to rest and seek restoration of his health. He was 49 years old. Before studying medicine Dr. Lutz was a practicing pharmacist having graduated from the St. Louis College of Pharmacy. He was city dispensary physician for five years and a member of the staff of the Alexian Brothers Hospital. He was a member of the St. Louis Medical Society and a Fellow of the American Medical Association.

FREDERICK WILHELM FROEHLING, M.D.

Dr. Frederick Wilhelm Froehling was born in Westphalia, Germany, September 19, 1864, and died May 17, 1926, at Kansas City. He was graduated from the University of Leipsig in 1891, and located in Kansas City in 1897.

He confined his practice to internal medicine and diagnosis. He was a member of the Jackson County Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association.

Dr. Froehling was naturalized in February, 1917, at this time declaring that his sympathies for this country had been settled when he married a Kansas City girl whom he met while she was studying at the Conservatory at Leipsig.

He was a member of the staff of Research Hospital, and was active in various Catholic organizations. His two fads were Oriental rugs and German police dogs.

Dr. Froehling enjoyed a large clientele in Kansas City and vicinity and made several important contributions to medical literature.

His technical training, of which he was capable of making a practical application, was of the type that is acquired only at the larger European universities. Many members of the profession, and his large clientele of patients, will greatly miss his extraordinary efficiency.—*Bull. Jackson County Medical Society.*

JESSE LELAND BOOGHER, M.D.

Well known among St. Louis physicians during the past thirty-four years, Dr. Jesse L. Boogher, St. Louis, died at the Missouri Baptist Sanitarium, following an operation for an attack of acute appendicitis, April 17, aged 58 years.

The son of Jesse Landis Boogher, a pioneer dry goods merchant of St. Louis, Dr. Boogher was educated in the St. Louis public schools, Smith Academy and Hiawasse College and received his medical degree from the St. Louis Medical College in 1892. He also studied in the Universities of Berlin, Vienna and Paris. After serving in the hospitals of London he began private practice in St. Louis giving special attention to genitourinary diseases.

Dr. Boogher was a member of the St. Louis Medical Society, the Missouri State Medical Association, the Mississippi Valley Medical Society, the American Medical Association, the American Urological Society.

ANDREW A. HENSKE, M.D.

Dr. Andrew A. Henske, a graduate of the Washington University Medical School, 1875, died at his home July 17, aged 74 years. Dr. Henske was one of the best known physicians in St. Louis and one of the few general practitioners remaining in the community, although he had practically retired from work during the past few years. He was a member of the St. Louis Medical Society and a Fellow of the American Medical Association.

His son, Dr. A. C. Henske, is an active practitioner in St. Louis and a brother, Dr. G. W. Henske, St. Louis, is a dentist.

AUGUST SCHWARZE, M.D.

Following an operation for appendicitis, Dr. August Schwarze, St. Louis, died at the Lutheran Hospital, June 28, aged 77 years.

Dr. Schwarze was a graduate of the Missouri Medical College, 1888, and was well known in medical circles in St. Louis. He was a member of the St. Louis Medical Society, a Mason and affiliated with various other fraternal organizations. He was born in Brawnschweig, Germany, and had lived in St. Louis for more than fifty years. A brother and married sister in Germany survive him. He had no relatives in St. Louis.

RINEHOLD SPEER, M.D.

Dr. R. S. Speer, St. Louis, a graduate of the Marion Sims Medical School, 1904, died at his home, July 7, aged 59 years. Dr. Speer was a native of Germany coming to this country after receiving his preliminary education in Germany. He was a member of the St. Louis Medical Society and a Fellow of the American Medical Association.

OBSERVATIONS ON ETIOLOGY OF TUMORS

James B. Murphy, New York (*Journal A. M. A.*, April 24, 1926), concludes his report on his work with chicken sarcoma as follows: Anaerobic "cultures" of chick embryo and rat placenta have proved just as effective as so-called culture of malignant tumors in activating chloroform treated filtrates of a chicken sarcoma. The necessity of assuming a cultivated living organism in the interpretation of Gye's results is eliminated.

EPITHELIOMA OF THE LACRIMAL SAC

An element distinctly unusual enters into the case reported by Ralph A. Fenton, Uortland, Ore. (*Journal A. M. A.*, Oct. 10, 1925); namely, the invasion of the normal lacrimal sac structures by a slowly growing epithelioma of the nasal skin, under the stimulating influence of roentgen-ray irradiation.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

- Camden County Medical Society, November 23, 1925.
Howard County Medical Society, January 8, 1926.
Chariton County Medical Society, January 20, 1926.
Ralls County Medical Society, February 27, 1926.
Schuyler County Medical Society, March 25, 1926.
Franklin County Medical Society, March 29, 1926.
Howell-Oregon Medical Society, April 7, 1926.
Monroe County Medical Society, April 14, 1926.
Platte County Medical Society, April 23, 1926.
Atchison County Medical Society, April 26, 1926.
Saline County Medical Society, May 15, 1926.

BATES COUNTY MEDICAL SOCIETY

JUNE MEETING

The meeting was called to order by Dr. E. E. Robinson, President, the following members being present: Drs. Robinson, Lusk, Insley, C. J. Allen, W. H. Allen, Bates, Freeman, Chastain, Foster, Crabtree, Thiele, Robinson, Rhoades, Smith, and Hartwell. The following members of the Vernon-Cedar County Society were present and we hope to have them all with us again in the future: Drs. Craig, Dulin, Altham, Hornback, Crawford, Morrison, and Willson. Drs. N. I. Stebbins and C. J. Smith of the Henry County Society were also present.

All business having been disposed of, the president called upon Dr. Ralph H. Major of The University of Kansas Department of Internal Medicine, who presented a paper and slides upon the subject of "Hypertension, its Types, Diagnosis, and Treatment."

Dr. Major's paper was well received and provoked much interesting and speculative discussion. We are glad indeed to have had the opportunity of hearing Dr. Major's discussion of this important subject, as he is one of the pioneers in present day research work on hypertension.

Dr. Robinson then introduced Dr. Thos. G. Orr, Professor of Surgery, Kansas University Medical School, who discussed "Diseases of the Biliary Tract." Dr. Orr's paper and slides stressed many important points in the medical and surgical treatment of diseases of the biliary tract.

Dr. Orr was followed on the program by Dr. Russell Haden, head of the Research Department of the University of Kansas School of Medicine, who presented an illustrated lecture on "The Anemias." Dr. Haden's paper provoked a free discussion of the subject, particular stress being laid upon the subject of pernicious anemia.

This meeting was one of the best which this society has ever had, both from the standpoint of the program itself and from the number in attendance. We welcome the visitors from other societies.

MEETING OF JULY 29.

The Bates County Medical Society held its regular monthly meeting at the Circuit Court Room, Butler, Missouri, Thursday, July 29, at 1:30 p. m.

For the first time in its history, the Society invited the public to share the professional portion of the program. About fifty laymen attended and numerous favorable comments have been made to different members of the society by the lay people who attended this meeting.

Members present were: Drs. Allen, Rhoades, Luter, Robinson, Freeman, Crabtree, Lusk, Chastain, Hartwell, and Thiele. Visiting physicians from our own county included Dr. S. L. Bates, and Dr. V. J. Crompton. Dr. Poague, Dr. Haire, Dr. Walker, and Dr. Smith were visitors from the Henry County Society, Drs. Craig, Love, and Sitton from the Vernon-Cedar County Society, and Dr. Phillips, and Dr. Crawford from the Cass County Society.

Drs. Jabez N. Jackson, Charles C. Conover, Frank R. Teachenor, Francis M. McCallum, and J. R. Ogelvie were visiting members from the Jackson County Society.

The first number on the program was an address by Dr. Jabez N. Jackson, of Kansas City, whose subject was "Physiology in Surgery." Dr. Jackson's address was very interesting and pleasing to the lay members of his audience, and very full of meaty information for the physicians.

Dr. Frank R. Teachenor followed Dr. Jackson on the program with a very interesting talk on "Hydrocephalus, its Types, and Surgical Avenues of Approach Used in the Treatment of Those Types." Dr. Teachenor's clinic on facial paralysis and his paper on hydrocephalus met with keen appreciation on the part of his listeners.

Dr. Charles C. Conover then talked upon "Hemogenous Infections of the Kidney." Dr. Conover made his usual hit.

After the program proper a short business session was held, and an assessment of \$1.00 per member was levied to defray expenses incident to our meetings.

The Bates County Society is looking forward to another visit from Drs. Jackson, Conover and Teachenor. Our visitors appreciate this kind of a program and we wish to thank these men for the program furnished and to invite them to return next year.

GEO. H. THIELE, M.D., Secretary-Treasurer.

CLAY COUNTY MEDICAL SOCIETY

Our meeting set for June 24 was postponed for one week on account of a heavy rainstorm. We, therefore, met July 1 at Winnwood Lake grounds. Beginning with a sumptuous "spread" arranged by our always dependable auxiliary, some thirty devotees of the healing art proceeded to enjoy an ideal meeting. The county was well represented from the various sections. Interest always manifest. Never better.

With Dr. R. J. Woods, of Smithville in the chair, the business session was held under the spreading boughs of a massive oak. The rich blue-grass carpeted the undulating floor—nature at her best.

Preparations were set afoot for the Twelfth Dis-

strict meeting in Excelsior Springs to take place in September. For our next meeting, to be in Kearney the last Thursday in August, it was directed that we invite the teachers, school superintendents, and the clergy of Clay County to attend and participate, as well as any outstanding citizens that place public health where it belongs—in first importance. It was also voted that we invite Dr. H. E. Pearse, of Kansas City, to address the meeting. A basket dinner at noon of that day is contemplated and a large attendance anticipated.

It is to be hoped that all our members may see the importance of medical organization today. Is the man true to his profession, who suffers his zeal to lapse and keep on lapsing? Organized quackery confronts us at every step of our way. It is medical indifference that watches it thrive.

Clay County is badly infested with charlatanism. The advertiser works boldly in defiance of ethical decency. We slaughter a diploma mill every fifty years or so, while their output organizes "free clinics" and preys on sick people by every artifice possible. Clay County is colossal in its quackery and quack institutions who "don't give a damn for medicine so long as we get the money." I quote from one of them.

J. J. GAINES, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society met in Higginsville, July 13, and was called to order by the President, Dr. Lewis Carthrae, Jr. The minutes of the last meeting were read and approved.

The following program was presented:

The Community Hospital. The discussion of this proposition was opened by Dr. D. C. Davis.

Case Record of the Massachusetts General Hospital—Discussion to be opened by Dr. R. C. Schooley, Odessa.

Treatment of Heart Diseases—Dr. Lewis Carthrae, Jr., Corder. Discussion to be opened by Dr. W. C. Webb, Higginsville.

Minor Disturbances of Pregnancy (Illustrated)—Dr. Edmund Lissack, Concordia.

Discussion opened by Dr. W. E. Koppenbrink, Higginsville.

The case record was first read and discussed. The diagnosis of the case was nephroptosis, bilateral, with kinking of the left ureter.

The hospital proposition was accepted with much enthusiasm. The following is an abstract of Dr. Davis' talk:

Purpose is to furnish the medical and surgical practitioners of Lafayette County with adequate and accessible hospital facilities. Campaign to raise sufficient funds for the construction and maintenance of about a twenty-bed hospital. Support of county society is necessary to successfully operate such a hospital. Open staff for all members of the County Society and others of recognized standing in adjacent counties. Business management entirely for the hospital. Duty of all members to cooperate in raising the necessary funds and to support in every way the campaign until completed. A committee of the Higginsville doctors, President and Secretary of the society (ex-officio) and one doctor from each town of the county to act in the capacity of the society to complete the campaign successfully.

The following resolutions presented by Dr. J. W. Horner, of Alma, were adopted:

WHEREAS, The citizens and community of Higginsville are contemplating the building of a community hospital in or near Higginsville, be it therefore

Resolved, That the Lafayette County Medical Society heartily indorses such a movement for the benefit of mankind and we, the individual members do hereby offer to support the same by sending as many patients as we deem advisable.

Dr. Martin, of Odessa, was asked to draw up a note of hope and sympathy for Dr. Lightner, of Odessa, because of his recent illness and operation. This is to be forwarded to the Research Hospital where Dr. Lightner is now a patient.

A Committee on Health was appointed and the following men constitute this committee: Drs. Cope, Koppenbrink and Schooley. This committee is to find out whether the Chiropractor has a right to practice his cult in Missouri.

Instead of having the usual meeting in Odessa in August it was moved to have the August meeting in Concordia.

The following compose the committee to raise the funds for the completion of the hospital project: President and Secretary of the society. (Ex-officio.) Higginsville doctors: Braecklein, Burgess, Webb, Davis and Koppenbrink. Corder, Moore, Alma, Horner. Mayview, Willis. Lexington, Cope. Waverly, Kelling. Bates City, Griffith. Concordia, Johnston. Dover, Harwood. Wellington, John Mann.

The following attended the meeting: Carthrae, Jr., Corder. Davis, Higginsville. Cope, Lexington. Johnston, Concordia. Koppenbrink, Higginsville. Burgess, Higginsville. Horner, Alma. Braecklein, Higginsville. Martin, Odessa. Moore, Corder. Webb, Higginsville. Schooley, Odessa. Lissack, E., Concordia. Willis, Mayview.

There being no further business the society adjourned.

DR. LEWIS CARTHRAE, JR., President.

DR. EDMUND LISSACK, Secretary.

LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society met in Lebanon, July 12, at the office of the Secretary, Dr. J. M. Billings. The meeting was called to order by the President, Dr. H. C. Hamilton, the following being present: Drs. Hamilton, Herbert, Lindsay, Scott, McComb, and Billings.

A communication from Dr. James Stewart, Secretary of the State Board of Health, was read and discussed.

A report of the committee of the American Medical Association in regard to aid in time of disaster was read and discussed.

A resolution was offered and unanimously carried that this society endorse the report and that we hold ourselves ready to give medical aid at any time, and in compliance with the request of the A. M. A. we informed Dr. Goodwin, Secretary of the State Medical Society, of this action.

Dr. J. A. McComb gave an informal talk on disease of the heart and reported a few cases. This led to a general free and easy conversational discussion of this class of diseases. Dr. McComb was requested to prepare a paper on some phase of heart disease for the next meeting.

There being no other business the society adjourned to meet September 6.

J. M. BILLINGS, M.D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The regular meeting of Lawrence-Stone County Medical Society was held on June 1 at Galena. The meeting opened at 12:30 with refreshments which were bountifully served by Mmes. Deatherage, Kerr, and the doctors' wives from the State Sanatorium.

The following program was rendered: Dr. Francis B. Camp read a paper on the myocardium, and talks were made by Drs. Callaway and Patterson on the use of drugs in heart diseases.

The president appointed the following committees: Public Health and Legislation: Drs. H. L. Kerr, W. I. Fulton, and T. T. O'Dell. Resolution of condolence for Dr. Griggs, deceased: Drs. Smith, Stevenson and Adams.

The application of Dr. H. C. Schenk, of the State Sanatorium, was acted upon favorably by the committee, Drs. Cowan, Andrews, and Stevenson and Dr. Schenk was elected a member.

Dr. James Stewart, Secretary of the State Board of Health, addressed the meeting on the work of the different departments. He stressed the importance of activity in the membership of the county societies toward needed legislation in public health matters.

Drs. G. B. Mitchell, of Branson, and Jos. W. Love, of Springfield, addressed the meeting on the medical practice act. Dr. Love read an "amended act," recommended by the Greene County Medical Society, and Dr. Kerr introduced a resolution that these amendments be recommended by this society. The motion carried.

Dr. George A. Johns, Medical Director for the State Eleemosynary Institutions, gave an interesting talk on the work being done at the State Hospitals. He stressed the importance of early recognition of mental derangements and tuberculosis.

A number of physicians were present from Springfield and other adjoining towns, with Drs. Adams, Andrews, Cowan, Deatherage, Doggett, William Holmes, Kerr, Lester, Pope, Shumate, Smith, and Stevenson of our home membership.

J. WILL SMITH, M.D., *President*,
T. T. O'DELL, M.D., *Secretary*.

LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met in Lewistown May 6, the President, Dr. J. C. Brown, in the chair. In addition to the president the following attended the meeting: Drs. P. W. Jennings, Canton; A. H. Lillard, La Belle; H. W. McKim, Newark, H. W. Harris, Canton.

Resolutions of respect and regret were adopted in the loss by death of Dr. T. F. McGlasson.

Delegates to the State Meeting were appointed as follows: H. W. McKim and P. W. Jennings with A. H. Lillard and H. W. Harris alternates.

J. C. BROWN, M.D., *President*.

LINN COUNTY MEDICAL SOCIETY

Linn County Medical Society met at Brookfield, June 2, with the president, Dr. L. O. Home, in the chair. There were 18 physicians present, comprising nearly all the eligible physicians in the county. Those who were arrears in payment of dues were asked to arrange for payment before or at the next meeting. On account of the society's having had no meetings for several years, the status of some of the members was in doubt and the secretary was instructed to ascertain from the State Asso-

ciation secretary the standing of each member in time to report at the next meeting.

A discussion arose concerning the matter of members of Linn County Medical Society associating with sectarian practitioners, and the following resolutions on this subject were adopted:

Resolutions

"This Society strongly condemns the association of any of its members, in any professional way, with osteopaths or chiropractors, therefore, be it

Resolved, That members of this Society will hereafter absolutely refuse to consult with osteopaths or chiropractors and will refuse to continue treating a case if any osteopath or chiropractor is called.

2. That when an osteopath or chiropractor is treating a case, and calls a member of this Society he will respond only on the following conditions: (a) That the patient or family be informed that the osteopath or chiropractor first be dismissed from the case.

3. That no member of this Society will give an anesthetic for an osteopath or chiropractor to perform any surgical operation.

4. That no member of this Society will allow an osteopath or chiropractor to give an anesthetic to a patient of his.

5. That no member will take X-ray plates nor laboratory work for any patient while under the care of an osteopath or chiropractor.

6. That no member of this Society will aid an osteopath or chiropractor to obtain narcotics.

7. Failure to observe these resolutions will be considered cause for expulsion from the Linn County Medical Society; be it further

Resolved, That any hospital that allows osteopaths or chiropractors to treat patients in its institution is unworthy and will be denied any further support by members of this Society.

The next meeting of the Society will be held in Marceline, Friday night, July 23.

J. B. SCOTT, M.D., *Secretary*.

VERNON-CEDAR COUNTY MEDICAL SOCIETY

The Vernon-Cedar County Medical Society met in the Chamber of Commerce room at El Dorado Springs, Thursday afternoon, July 15. Doctors Sam H. Snyder, Charles C. Dennie and Clinton K. Smith, of Kansas City, were the visiting essayists.

The program follows:

The Secretary reported that two meetings had been held this year, 10 lectures had been delivered, 10 clinical cases had been examined and the average attendance was 31.

Examination of clinical cases.

Lecture, "Early Diagnosis of Rheumatic Heart Disease," by Dr. Sam H. Snyder.

Round Table, "Diseases of the Summer Time," led by Dr. Frank A. Martin of El Dorado Springs and Dr. J. M. Yater of Nevada.

Lecture, "Skin Diseases Common in Infancy," by Dr. Charles C. Dennie.

Lecture, "On Ureteral Block," by Dr. Clinton K. Smith.

After the meeting adjourned the society was the guest of the Cedar County physicians at a sumptuous banquet in the dining room of the Park Hotel.

It was unanimously agreed that this was one of the very best meetings ever held by the Vernon-Cedar County Medical Society, and that the banquet was unequaled.

The next meeting will be held in Nevada, September 9.

Those present were: Drs. Snyder, Dennie and Smith, of Kansas City; Drs. Craig, Dulin, Smith, Love, Yater, Combs, Davis, Amerman, Bruton and Hornback, of Nevada; Dr. C. F. Kelley and wife, of Drexel; Dr. H. A. Rhodes, of Foster; Drs. Dawson, Martin and Martin, Crawford, Dunaway, Royston and Gray, of El Dorado Springs; Dr. Simrell, of Caplinger Mills; Dr. Althem, of Sheldon; Dr. Davis, of Walker; Dr. Keithley, of Milo; Drs. Smith and Rawlins, of Appleton City; Dr. Freeman, of Rockville; and Dr. Richards, of Tiffin.

J. T. HORNBACK, M.D., Secretary.

WOMEN'S AUXILIARY

OFFICERS 1925-1926

President, Mrs. A. B. McGlothlan, St. Joseph.
President-Elect, Mrs. W. M. Bickford, Marshall.
Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

1st Vice President, Mrs. A. W. McAlester, Kansas City.

2nd Vice President, Mrs. Archer O'Reilly, St. Louis.

3rd Vice President, Mrs. M. P. Neal, Columbia.

4th Vice President, Mrs. Wm. Spaulding, Poplar Bluff.

Corresponding Secretary, Mrs. H. S. Conrad, St. Joseph.

Recording Secretary, Mrs. M. A. Hanna, Kansas City.

Treasurer, Mrs. C. T. Ryland, Lexington.

Directors: Mrs. Guy L. Noyes, Columbia; Mrs. Leland Boogher, St. Louis; Mrs. Geo. H. Hoxie, Kansas City; Mrs. Frank Hinchey, St. Louis; Mrs. Walter Baumgarten, St. Louis; Mrs. M. P. Overholser, Harrisonville; Mrs. H. F. Parker, Warrensburg; Mrs. R. W. Berrey, Mexico; Mrs. J. G. Montgomery, Kansas City; Mrs. W. F. O'Malley, Webster Groves.

WOMEN'S AUXILIARY TO THE MISSOURI STATE MEDICAL ASSOCIATION

Second Annual Meeting, St. Louis
May 18, 19, 1926

MINUTES OF THE EXECUTIVE BOARD

Parlor, Coronado Hotel

Tuesday, May 18, 1926—Morning Session

The Second Annual Meeting of the Executive Board of the Women's Auxiliary to the Missouri State Medical Association was called to order Tuesday, May 18, 1926, in the parlor of the Coronado Hotel, at 10:00 o'clock a. m., by the President, Mrs. M. P. Overholser, Harrisonville. The following were present:

Mrs. M. P. Overholser, Harrisonville, President.
Mrs. Willard Bartlett, St. Louis, Chairman of Organization.

Mrs. C. T. Ryland, Lexington, Treasurer.

Mrs. J. G. Montgomery, Kansas City, Corresponding Secretary.

Mrs. A. B. McGlothlan, St. Joseph, Recording Secretary.

Mrs. Frank Hinchey, St. Louis.

Mrs. Harry F. Parker, Warrensburg.

Mrs. A. B. McGlothlan read the Secretary's report which was accepted.

Mrs. J. G. Montgomery read the Corresponding Secretary's report as follows:

Report of the Corresponding Secretary

The Corresponding Secretary has been relieved partially by the recommendation made May 5, 1926, that a Women's Auxiliary Department be provided in the *Journal of the Missouri State Medical Association*. This has been done and the issue of the August, 1925, number carried a full report of the Kansas City Meeting.

The attention of all auxiliaries was called to this report and all urged to use consideration of this report in their regular programs.

Reports of the proceedings of county auxiliaries has appeared monthly in the Women's Auxiliary Department of THE JOURNAL as well as the recommendations of the presidents and standing committees.

All circular letters sent out for the President and the Chairman of Education have been sent to every county where an auxiliary chairman has been named. The number of such counties is 60 in all.

57 such letters have gone out for the Education Chairman.

78 Pertaining to annual dues, etc.

78 Notices of Annual Meeting.

78 Programs of Annual Meeting.

34 Concerning amendments to the constitution.

34 Personal letters to members at large.

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349 Total.

This does not include the personal letters sent out by the President or the Committee Chairmen.

The officers and committee workers have carried the correspondence work of their own departments (Mrs. Bartlett, Organization; Mrs. Long, Hygeia; Mrs. Overholser, Publicity) and their correspondence is not included in this report.

PEARL S. MONTGOMERY,
(Mrs. James G. Montgomery)
Corresponding Secretary.

On motion the report was accepted.

The fact that Mrs. Overholser, the President, had acted as chairman of publicity during the year brought the suggestion from her that a Chairman of Publicity should be provided so that information concerning the work of county auxiliaries can be collected and disseminated. This recommendation met with the approval of the board.

Report of Chairman of Organization

The report of the Chairman of Organization was read by Mrs. Willard Bartlett, St. Louis. She reported that six new counties had been organized during the year making sixty-one in all. Mrs. Bartlett had suggested to the men's organization that she would stand ready to organize auxiliaries in counties where they were desired, but that such organization would not be pushed aggressively as it had been done the first year.

Mrs. Bartlett recommended that the state be divided into four regions and that the vice presidents or other officers be held responsible for organization in the various regions, asking to be relieved as Chairman of Organization.

Mrs. Bartlett also suggested that an editor be appointed for the Women's Auxiliary Department of the STATE MEDICAL JOURNAL, this editor take the place of a Chairman for Publicity.

The recommendation as to the editor for the Women's Auxiliary Department in THE JOURNAL was accepted.

A motion was made by Mrs. Hoxie, Kansas City, seconded by Mrs. Parker, Warrensburg, that the constitution be amended to create an Editor of the Auxiliary Department in the STATE JOURNAL, that the office be appointive, by the president with the approval of the Executive Board, and that this officer, by virtue of her office, be a member of the executive board. The motion carried and was referred to the committee on amendments.

After discussing Mrs. Bartlett's recommendation, asking that she be relieved as Chairman of Organization, the board expressed deepest regret that she could not continue in the capacity and agreed to recommend that Mrs. Bartlett be relieved as Chairman but that she remain as a director on the board in charge of organization assisted by the four vice presidents who should act as regional chairmen.

Mrs. Geo. E. Bellows, Chairman of Legislation, was unable to be present. Her report was read by Mrs. Montgomery and follows:

Report of the Legislative Committee of the Women's Auxiliary

The year 1925-1926 has been the off year for activities for the enactment of laws which the State Medical Association would desire us to support. However, the county auxiliaries have been urged to acquaint themselves with existing health laws, notably those pertaining to the State Board of Health, its organization, activities and means of usefulness to the public.

Attention has been called to the health laws of, or connected with, the Department of Education resulting in the establishing of the Division of Hygiene and Physical Education in our public schools.

At the last session of our state legislature an important law providing for the appointment of county health nurses was passed. This law provides that on the application of 250 tax payers and the approval of the State Board of Health, a county court shall employ a county health nurse. The use of this law in securing county health nurses will it is hoped serve as the entering wedge in counties for the securing of full time complete county health units.

The county auxiliaries have been of admitted aid in securing additional county health units and in retaining and extending those already established, notably Jackson County. More county health units would have been established by this time had the state funds not been cut by lack of state revenue.

Inasmuch as the State Auxiliary program adopted by the State Executive Board in St. Louis in October, 1924, advises cooperation of county auxiliaries with the State Health Department, I recommend that the state and county boards ask the State Health Commissioner for recommendations regarding any work our organization may do before or in connection with the next session of the state legislature, subject of course to the approval of the State Medical Association.

Respectfully submitted,

STELLA F. BELLOWES,
(Mrs. George E. Bellows)
Chairman of Legislation.

On motion the report was accepted and the recommendations were approved.

The report of the Chairman of Education was also read by Mrs. Montgomery since Mrs. Gibson, the chairman, could not be present. The report follows:

Report of Chairman of Education

Last year was, of course, a year of organization, and only in a small measure could most counties start educational work. When, however, the educational reports from the counties for this year were assembled from my own correspondence and the columns of the *STATE JOURNAL* the results for the year just closing, when many counties are still occupied with organization problems, were quite amazing. Compared with many of the state auxiliaries who reported to the Dallas meeting that they were occupied chiefly with social activities, the county auxiliaries of Missouri have most all a serious side to their work in addition to the necessary social side. They seem to feel the responsibility of their position as a link between the medical profession and the laity. Even in many of the rural counties where members are few and scattered and means of communication poor the beginning of educational work has been made, if in nothing else than in the support of *Hygeia*; and in some of the counties with more members and larger towns, such as Buchanan and Saline counties, splendid, well organized public health work has been done. Better health conditions must follow the intelligent work of such capable and active auxiliaries.

The work of the Educational Committee has been different this year from last. Having our own department in the *STATE JOURNAL* has made the educational work more efficient. Auxiliaries could quickly get suggestions from one another's work from the president and board and county chairmen. For the same reason the work this year has been less personal. The constant interesting personal letters drop down to occasional requests for a help with programs and for literature. The elaborate program for last year was continued with a few changes in the expectation that some part of it would appeal to the needs of each auxiliary. The reports of this year emphasize the fact that the needs and interests and possibilities of the auxiliaries differ greatly and that the work of the counties will necessarily vary. A fixed program for meetings and for work does not fit the needs of all. Our program, as last year, emphasized the county health unit as the best solution of health needs, emphasized sanitation (good water, sewerage, pure milk, clean foods, fly prevention) as the first of necessities in any public health work, advocating the study of the health needs

of the county and state health conditions through vital statistics, and a study of the State Board of Health itself, and suggesting as subjects of study smallpox and diphtheria prevention, and prevention and care of trachoma; child nutrition, care and feeding of infants; well baby clinics, child health clinics, cancer education; education of expectant mothers; school nurses. Following the action of the State Medical Association in Kansas City last year in voting its approval and financial assistance to the divisions of Hygiene and Physical Education in the public school system, Mrs. Overholser recommended our own co-operation as well. It was especially pointed out to us by Dr. Dodson in Kansas City last year the importance of starting any health work with children, and Mrs. Overholser's suggestion is in line with this, as was noted at the time the financial provision for physical education was left out of last year's budget. In response to this announcement much interest has been shown in this department of education and definite efforts made in a number of counties to keep the work going. Jackson County raised the money by a bridge party which brought in more than four hundred dollars to be divided equally between Hygeia and this physical education work. Buchanan County from the bridge party method was successful in raising money for Hygeia. Mrs. Long, State Chairman for Hygeia, will report all this Hygeia work herself. Jackson County found the card party useful as well in adding new members. The year's report shows that concrete work appeals to most auxiliaries. Hygeia subscriptions and the Health Poster Contests were concrete ideas that brought splendid support.

I am sorry that I have no special report of all of the counties who sponsored the Health Poster Contest. Buchanan, Jackson, Laclede, Cape Girardeau, Cass, Saline definitely reported work on the contest. It cannot be doubted that through this Health Poster Contest hundreds of school children are getting an interest in and an understanding of health problems. It is interesting to hear that the auxiliary appeal brought the Health Poster Contest in Laclede County although it has no organized auxiliary. Mrs. J. C. Scott who was responsible for starting this work has always been in close touch with the auxiliary.

Especially interesting is the starting of work in connection with rural schools by Cape Girardeau. Each member has adopted one or two rural schools which she endeavors to help in bettering conditions. This is work in a very important direction. Saline county has been using some of the same methods; Vernon and Cedar counties have been working along basic sanitary lines trying to put into effect sanitary provisions regarding the handling of food, receiving valuable suggestions from Dr. North and Dr. Ridge who addressed one of their meetings. The Saline County Auxiliary sponsored a milk survey in the Marshal community.

Cass County sponsored the free examination of boys and girls of the County Farm Clubs competing for entry to the State Health Contest at the Sedalia State Fair. The members of the auxiliary helped the doctors with the examining work. Saline County sanctioned and helped carry through a splendid child health conference which we have read about in the *STATE JOURNAL*. Lafayette County auxiliary sponsored a series of five child health clinics in different parts of the county. Clay County undertook some cancer hygiene work after the sad loss of their members by cancer. That gives a surprising example of what an auxiliary can do after being organized so short a time. In some cases the education work through the pulpits of the county preceding the health clinics has been especially interesting as well as the newspaper publicity secured.

Many of the auxiliaries have had regular educational programs in their meetings. The auxiliary at Poplar Bluff took over the health notes of a local newspaper when the local club women issued the paper for a day. Several auxiliaries have reported a close cooperation with the Parent Teacher Organization in health matters. This work with other clubs is a sort that we are especially fitted to do and one which our constitution declares one of our objects in organizing this work.

This report will be supplemented by many personal county auxiliaries, as well as by Mrs. Long's report of *Hygeia*. The Education Committee supplied every county auxiliary with literature on all the important subjects on the suggested programs so that each would have something immediately at hand to answer their own and others' questions. I feel that I have reported a noteworthy list of pieces of health work for our second year of organization.

I wish to close with an emphasis on these facts: That we can do our best work by working in close cooperation with the State Medical Association to which we are Auxiliary and with the State Board of Health; that for counties with health units there are still many activities; that for other counties the health unit is the accepted solution for many problems so far as they can be solved at present; that good sanitation must be the first requisite in any health program; and that it is most important to work with and for children, as they are our future men and women.

SYBIL M. GIBSON,
Chairman of Education.

Mrs. C. T. Ryland, Lexington, read the report of the Treasurer as follows:

Report of the Treasurer

Receipts

From former Treasurer, Mrs. Caulk.....	\$175.75
Dues from June 1, 1925 to May, 1926.....	155.50
Received from Jackson County Hygeia Sales.....	10.00

Total.....\$341.25

Disbursements.

To State President for stationery.....	\$19.40
Dues State Federation Women's Clubs.....	5.00
National Dues to Auxiliary A. M. A.....	5.00
Gift to Women's Auxiliary A. M. A.....	50.00

Total.....\$ 79.40

Balance in bank May 14, 1926.....\$261.85

\$341.25

Mrs. David S. Long read the report of the Chairman for Hygeia as follows:

Report of Chairman for Hygeia

In June, 1925, following the annual meeting of the Women's Auxiliary the following plans were formulated to increase the circulation of Hygeia in Missouri:

1. Every doctor a subscriber to Hygeia.
2. A lay subscriber for every doctor.
3. Hygeia in public schools and reading rooms.

After one year of earnest cooperation with the local auxiliaries, we are glad to report an increase of about 500 subscriptions due to the efforts of the women. A large majority of these came from the Buchanan County Auxiliary which gave a benefit bridge party and used the proceeds to place Hygeia in the rural schools. The Buchanan County Medical Society appropriated money from their treasury for 160 subscriptions and about fifty subscriptions were donated by individual doctors. These subscriptions were sent to teachers in the city schools, parochial schools and reading rooms in public places.

We regret that not every doctor in Missouri is a subscriber. We realize that Hygeia is a layman's magazine, but we have found it easy to sell Hygeia to a layman who has seen it on his doctor's reading table. That is the reason why our first objective was to place Hygeia in the office of every doctor.

Hygeia is doing a great deal to enlighten the public. Not only in regard to public health and the health of the individual, but it is also creating a more sympathetic understanding of doctors and their work and is thus helping to bring about the cooperation which the doctors must have if they are to raise the standards of public health.

Many doctors realize this. They say that young mothers who read Hygeia talk to them with greater intelligence concerning their children. School boards are more sympathetic to school health measures when they have read Hygeia.

Increasing the circulation of Hygeia is a definite task for the women's auxiliaries. Mr. F. Y. Cargill, A.M.A., Chicago, will send out campaign outlines upon request.

Respectfully submitted,

MRS. DAVID S. LONG,
Harrisonville, Mo.

The report of the Chairman of Education and Publicity of the Auxiliary to the A. M. A. was called for. Owing to pressure of time the full report was not read since it was to be sent to presidents of all state auxiliaries. The recommendations were read and were as follows:

Recommendations of Chairman of Education

1. That state auxiliaries adopt as part of their program the improvement of health conditions in rural communities, working toward county health departments.
2. That state auxiliaries work for the extension of Hygeia, trying to double last year's subscriptions.
3. That state auxiliaries cooperate with State Board of Health.

These recommendations were approved by the board for the State of Missouri.

The Hygeia quotas for each county in Missouri as suggested by Mr. Cargill were discussed and it was decided that a readjustment of these quotas should be worked out with the circulation manager.

On motion adjourned.

After adjournment, the members of the executive board, the state delegates and visiting ladies were driven to the St. Louis Women's Club where a delightful luncheon was provided in their honor by the Women's Auxiliary to the St. Louis Medical Society with Mrs. Frank Hinchey, St. Louis, presiding.

Mrs. Guy Oliver gave a talk on the "Work of the Girl Scouts."

Mrs. A. W. McAlester, Kansas City, talked about the work of the Jackson County Auxiliary.

Mrs. A. B. McGlothlan, St. Joseph, outlined the outstanding work of the Buchanan County Auxiliary.

Mrs. Overholser, the President, paid a very beautiful tribute to the women of the St. Louis Auxiliary who had twice been our hostesses and which she pointed out had supplied the first vice president to the National Auxiliary in the person of Mrs. Wm. W. Graves, the State Chairman of Organization, Mrs. Willard Bartlett, as well as other officers and directors.

Following the luncheon, the visiting ladies were taken for a drive over the city.

Wednesday, May 19, 1926—Morning Session

The meeting was called to order by the President, Mrs. M. P. Overholser, Harrisonville, at 10 a. m., Wednesday, May 19, 1926.

The President introduced Mrs. Frank Hinchey, President of the St. Louis City Auxiliary, who extended greetings to the members from that auxiliary.

Dr. R. L. Russell, Jefferson City, of the State Board of Health, addressed the meeting on, "Co-operative Health Work in Counties."

Dr. Ross Hopkins, Jefferson City, Statistician of the State Board of Health, read a paper on the "Importance of Vital Statistics to Missouri."

Dr. Henry S. Curtis, Jefferson City, State Director of Hygiene and Physical Education, reviewed the program of health education in the public schools as outlined by the State Department of Education.

Miss Elizabeth Simon, Jefferson City, of the State Board of Health, discussed "The Duties of a Public Health Nurse."

On motion adjourned.

Luncheon Session

At the close of the morning session luncheon was served and during the luncheon hour, Mrs. Washington E. Fischel, St. Louis, welcomed the guests to St. Louis, after the invocation had been pronounced by the Reverend Frederick F. Johnson, Bishop of Missouri.

Dr. Amand Ravold, St. Louis, gave an interesting account of how the new building of the St. Louis Medical Society had been secured and emphasized the part that the women had taken in making the building possible.

Dr. James Stewart, Jefferson City, Secretary of the State Board of Health, gave a brief account of the work of the board in all its departments.

On motion adjourned.

MINUTES OF THE GENERAL MEETING

Coronado Hotel, Wednesday, May 19, 1926—
3:00 p. m.

The General Meeting of the Second Annual Meeting of the Women's Auxiliary was called to order by the President, Mrs. M. P. Overholser, Harrisonville, in the Parlor of the Coronado Hotel, St. Louis, Wednesday, May 19, 1926, at 3 p. m.

The Secretary's report was read and accepted.

The report of the Chairman of Organization was read by Mrs. Willard Bartlett, St. Louis. (See page 312). She recommended the following:

1. That the Chairman of Organization be abolished.
2. That an editor of the Auxiliary Department of THE JOURNAL of the State Medical Society be appointed.
3. That the State be divided into four regions for or-

ganization each region under a vice president of the Auxiliary.

The recommendations were referred to the Committee on Resolutions.

The Corresponding Secretary's report was read by Mrs. J. G. Montgomery. (See page 312).

The report of the Chairman of Legislation was read by Mrs. Montgomery. (See page 313).

Mrs. Bellows' recommendation that the State and County Boards ask the State Health Commissioner for recommendations regarding any work our organization may do before or in connection with the next session of the legislature, subject to the approval of the State Medical Association, was referred to the Committee on Resolutions.

Mrs. Fischel spoke of Mrs. Bellows' report and urged the Auxiliary to assist in securing adequate appropriation for the Physical Education Department of State Department of Education.

On motion this was referred to Resolutions Committee.

The report of the State Chairman of Education was read by the secretary, Mrs. Gibson, the chairman, being unable to be present. (See page 313).

On motion the report was adopted.

The Treasurer's report was read by Mrs. C. T. Ryland, Lexington. (See page 314).

On motion the report was adopted.

REPORTS OF COUNTY PRESIDENTS

Audrain County

Audrain County, with a membership of eleven, was represented by Mrs. R. W. Berrey who gave a very interesting report of how a public health nurse was secured in this county. They hope to put a welfare worker on their staff this fall to do relief work and necessary nursing.

Buchanan County

Buchanan County, membership 54, was represented by Mrs. J. M. Bell and Mrs. A. B. McGlothlan, of St. Joseph. Buchanan County reported two social meetings, one a tea at the home of the president, the opening meeting of the year to which all members and all women eligible for membership were invited. About 75 attended. The second was a tea at the home of Mrs. J. I. Byrne in March at which Mrs. Geo. H. Hoxie, of Kansas City, presented the State May Day Child Health Day Committee's plans for 1926. Five other meetings were held at which health programs were given. Two major pieces of work were attempted by the Buchanan County Auxiliary: The first was the attempt to secure a full time county health department. While this attempt failed of consummation, the attention of hundreds of people was attracted to right methods of administering public health. We consider the education gotten over worth the efforts put forth though the attempt failed because of an unwilling County Court. The other piece of work was the extension of Hygeia. The auxiliary paid for a subscription to Hygeia for each rural school in the county by a benefit bridge party. Seeing the value of such education our Medical Society then appropriated out of its treasury sufficient money to pay one hundred sixty subscriptions to go to teachers of the city schools, while individual doctors contributed enough for about fifty more subscriptions. Several Parent Teachers Circles subscribed for the magazine for their own use and about fifty-two individual subscriptions were secured, making 333 in all during the auxiliary year 1925-1926.

Partly as a result of Hygeia being sent to all teachers from the fourth grade up including the eighth, a health poster for every child was put in the art course, and an exhibit of these posters was held in May at which the Auxiliary women were hostesses. The A.M.A. loaned about seventy-five posters which were used in the schools for several weeks and were found very valuable in stimulating interest in health posters.

Boone County

Boone County with a membership of fifteen was represented by Mrs. W. P. Dysart, Columbia. This report is so full of interest that the secretary records it in full as follows:

At the Annual Meeting in Kansas City last year, the Auxiliaries were asked to assist in the organization of County Health Units and to each secure at least ten subscriptions to Hygeia.

Health Unit

Boone County is proud to have a county health unit, which has been efficiently operating since the first of the year. The total appropriation for this unit was \$11,820. This money was appropriated as follows:

City of Columbia	\$2,000.00
School Board	1,200.00
International Board	2,130.00
County	2,500.00
State	1,990.00

By the city and county increasing their budget \$3,000 or over last year which only provided a part time health officer and one nurse, they were enabled to secure federal and state appropriations amounting to \$4,120. This added sum made it possible to have full time health officers and therefore much more efficient service.

The officers are, a full time health physician, full time county nurse, full time city nurse, and clerk. There is also a half time assistant county health officer, whose duty is chiefly that of sanitary inspection.

Hygeia Campaign

The Auxiliary made a campaign for subscriptions to Hygeia and secured ten. Two of these subscriptions were given by the Auxiliary to two rural schools and we have been assured by the teachers that the pupils are making constant use of the magazine and find it helpful and enjoyable.

New Members

Two new members were added this year, making a total membership of fifteen.

Christmas Work

With the aid of our visiting teacher, the Auxiliary got in touch with one of the poorer districts of the country and tried to have something in the way of clothing and candy to bring some Christmas cheer to each of the children in the school and to the other members of the more needy families. The clothes were wrapped by the members of the Auxiliary and, together with paper horns filled with candy, were distributed at the Christmas exercises of the school.

We were told by the teacher of the school of the things most needed and desired and although we were handicapped by lack of funds we did our best to meet the demand. One child who was not sufficiently developed to attend school wanted tools. Enough interest was aroused in this case so that the tools were furnished. We received a lovely letter from the teacher of the school thanking us for the gifts and particularly telling us how helpful the tools had proved to the child who before had been a worry to his mother. He has made various useful articles for the family, such as henches, foot stools, a mail box, and in this way adds small comforts to the family in which he was formerly a burden.

Meetings

The Auxiliary members found that it was often inconvenient to hold meetings at the time the Boone County Medical Society held their meetings, and we are trying the plan this year of meeting in the homes of the members in the afternoons. We find these afternoon meetings much more satisfactory. We meet once a month.

Picnic

For some time the Auxiliary has been looking forward to a picnic. The plans were completed at our May meeting and the picnic for members, their husbands and families will be held early in June.

Mrs. MARGUERITE MUIR, Secretary.

Butler County

Butler County membership 9, was represented by Mrs. W. L. Brandon, Poplar Bluff. This auxiliary is one of the six organized in 1925 and while it is young and the membership small, the written report sent in by the secretary, Mrs. McPheeters, shows that the auxiliary is alive and ready for active work.

Cass County

Cass County membership, 18, was represented by Mrs. DDavid S. Long as delegate. This county also furnished our state president for the year, Mrs. M. P. Overholser. This auxiliary holds four regular meetings per year. Its executive board has had one special meeting. The annual election of officers is held at the June meeting. In June, 1925, this meeting closed with a joint picnic luncheon with the Cass County Medical Society and visitors from other societies and auxiliaries. At the September meeting following the business session the Auxiliary attended the scientific program of the medical society, finding it most informing and interesting. This meeting was followed by a luncheon. At the December meeting, the county superintendent of schools and president of the local Parent-Teachers Association were present and made talks to our members. Arrangements were made for cooperating with the

schools in the Health Poster Contest. Prizes were offered by the Auxiliary for the best essay by a school teacher of the county on "How I Use Hygeia in My Teaching." Our chairman of education, Mrs. Long, has secured some twenty-five Hygeia subscriptions in Cass County. Our Auxiliary has placed Hygeia in the rest rooms of Harrisonville and Pleasant Hill. It has done much to extend cordial relations among the families of our physicians.

Clay County

The Clay County Auxiliary was organized in August, 1924, at Kearney, and since then has met every two months. There are twelve members and three subscribers to Hygeia. At every meeting we discuss one or two articles from Hygeia and have about eight women who are really interested. We hope that this next year they may interest others.

At one meeting we had a review of Sinclair Lewis's book, Martin "Arrowsmith" which provoked a most animated discussion. The average attendance is 8 members and usually visiting doctors' wives. Our meetings are held at the time of the Clay County Medical Society and the two meetings are always preceded by a joint dinner. The physicians say that our auxiliary has helped their interest and attendance.

I believe this next year we will accomplish something.

LUELLA GOODSON.

Gentry County

Gentry County with sixteen members could send no representative to the St. Louis meeting but the following report was sent to the secretary:

We are enjoying our Auxiliary very much and we have had some profitable meetings. We meet at the same time and place with the County Medical Association. We hold our meetings of about one hour separate and then the two associations come together for a social hour. We have been having a fine spirit. The doctors have given us talks on the line of medicine and we have read articles from Hygeia which we have enjoyed. We hope to push the circulation of this splendid magazine this spring.

The condition of the roads and weather and much sickness has prevented our meeting as often as we should like.

Our Christmas party was a happy occasion being given by Dr. and Mrs. Martin, of Albany.

Henry County

Henry County, one of the new auxiliaries, reported eight charter members. The report of the president follows:

The Henry County Women's Auxiliary was organized, with eight charter members. The following officers were elected: Mrs. Robert D. Haire, President; Mrs. J. R. Russell, Secretary; Mrs. J. R. Hampton, Vice President; Mrs. G. L. Walker, Treasurer.

The second meeting was held May 6 and one new member was added. Due to unavoidable circumstances the attendance was small but it was enthusiastic. The report on Hygeia was encouraging in that interest had been aroused and there were several prospective subscribers and a possibility of putting it in our schools in the fall through the achievement of the Parent-Teacher Association.

No education work has been attempted since Henry County has medical and dental inspection in all schools, Red Cross and visiting nurses. Schools have participated in the Health Campaign and Poster Contest for several years. We also have physical training taught and ample play grounds. The field having been so nearly covered we are devoting our time to better acquaintance among the doctors, nurses and families and a social hour together, with educational entertainment, such as music, readings, talks on various subjects, as the hostess provides.

Johnson County

The Johnson County Auxiliary has held regular monthly meetings during the winter of 1925-1926. Owing to railroad facilities, bad roads, and worse weather, out of town ladies have not been able to attend, but local members have kept up their interest quite faithfully.

We have made ourselves felt in the community by keeping a copy of Hygeia constantly in the public library. We hope to make this a permanent donation. We have placed Hygeia in the high school and all of the ward schools for next year. We had a three weeks display of the posters sent out from Hygeia headquarters. One of our Auxiliary members who is at present the public school nurse had all of the fifth and sixth grade pupils keep a health notebook; a little reward was offered for the best book. Many excellent and clever health ideas were worked out. The children showed much originality and proved that the health program is being put across in a real sense and is bringing results.

We hope by fall to be able to have a county nurse and are working for dairy inspection also.

Mrs. HARRY F. PARKER, President.

Jackson County

Jackson County Auxiliary has a membership of 250 with \$925 in the treasury. Meetings are held the first Friday of each month at the homes of the members and are well at-

tended, from 85 to 125 usually being present. A short program and social hour follow the business.

At the January meeting, a social card party was held at which fifty new members were obtained. In April, a benefit was given, and \$400 was cleared. Two hundred dollars were donated for Hygiene and Physical Education in Missouri Public schools, and \$200 will be used to buy subscriptions to Hygeia to be placed in the rural schools of Jackson County and in other places which have asked for the magazine.

The Auxiliary has assisted the County Health Unit. Mrs. Mullin, County Health Nurse, gave a most instructive and interesting talk before the Auxiliary of her work throughout the county. At the same meeting we had the pleasure of having Mrs. M. P. Overholser, our State President, as our guest, who also gave us a delightful talk on the activities of both the national and state auxiliaries.

The Jackson County Medical Society and the Women's Auxiliary have held several joint meetings which have been most pleasant. In a recent Bulletin of the Jackson County Medical Society they spoke of the increasing benefit of the Auxiliary in promoting friendliness and cooperation and of the expanding and extending influences of the organization; this to us was a most gratifying compliment.

Mrs. A. W. McALESTER, President.

Lafayette County

Lafayette County Auxiliary was organized by Mrs. Hoxie in the fall of 1925. There are sixteen paid up members and two honorary members. Meetings are held each month. The programs sent by the state were used, Hygeia is studied, clip sheet is used and a campaign for Hygeia was put on. We assisted in a health campaign last summer and two hundred children were examined at Odessa. A survey for crippled children was made and our members assisted in getting a Red Cross nurse for the county for three months this fall. We have our social meeting each year, where the doctors and their wives have dinner together, then a speaker. This year we are inviting Ray County to meet with us.

Mrs. RENICK SCHOOLEY, President.

St. Louis County

The Women's Auxiliary of St. Louis County meets once a month, the same afternoon as the St. Louis County Medical Society. We try to promote interest, meet at the homes of the members, serve light lunch, and discuss what we hope to do. We have 14 members and think by these social meetings to increase our membership. We are placing Hygeia in the Webster Groves Schools. The medical society has a yearly banquet for the ladies and in this way we have become acquainted. We are very much interested in the Women's Auxiliary.

Mrs. LENA TOWNSEND.

St. Louis City

The organization has a membership of 275 or more. Monthly meetings have been held by the executive board at the building of the St. Louis Medical Society and there have been three social meetings for the full membership with attractive programs.

Our representatives to the Community Council, which comprises most of the health and welfare agencies of the city, were instrumental in promoting in the St. Louis Public Schools an effective May Day program. Also one by the Tuberculosis Society during that week.

The chairman of the Hygeia Committee reports that this year the Hygeia Committee attempted to introduce the magazine into the high schools, libraries, churches, Parent-Teachers Associations and Federated Clubs.

A list of 32 presidents of the various Parent-Teachers Associations was obtained from Mrs. George Eigel, Secretary of the National Organization. A sample copy, with literature and a form letter, drawing attention to the group rates and commission, as well as the prize of \$25 offered by the Auxiliary to the organization selling the most copies over 20, was sent to each president; also to the president of the Webster Groves and St. Louis Ethical Society, Child Study Group, and the Mother Craft Club of the Grace Methodist Church and Second Presbyterian Church. Twenty copies, with literature, were sent to the St. Louis Ethical Society to be distributed to the various leaders of the Sunday Assembly.

Copies and literature were also sent to Mr. Gerling, Assistant Superintendent of the St. Louis Public Schools, Mr. Kindervater, Superintendent of Physical Culture of St. Louis Public Schools, Mr. Miller, Principal of Bryan Mullanphy School, Miss Brown and Miss Garesche, Physical Culture teachers at the Roosevelt High School, and Miss Wilhelmi at Cleveland High School.

To reach the libraries, sample copies were sent to Mr. Carpenter, President of the Board of the St. Louis Public Libraries, and to Mr. Bostwick, Chief Librarian.

The group rates and notice of the \$25 prize were posted on the bulletin board of the College Club as well as being announced in the Club's monthly program.

As a result of our campaign we have obtained new subscriptions from the Wednesday Club, Town Club, Cleveland High School and various individuals.

Mrs. FRANK HINCHEY, President.

Vernon-Cedar County

The Vernon-Cedar Counties Auxiliary had no representative at the St. Louis meeting but the following report was sent to the Secretary:

Seven meetings (including called meetings) have been held and our membership has been increased to eighteen, though several names were dropped from the roll through members having moved away from Nevada.

One of our outstanding meetings was held at the State Hospital, with Dr. and Mrs. Bruton as our hosts and Mrs. M. P. Overholser, our State President, as our guest.

Another very helpful meeting was held in the parlors of the M. E. church, following a luncheon given by the Chamber of Commerce, at which Dr. Emmett P. North and other distinguished physicians were principal speakers. We are doing a good work by placing copies of Hygeia in every public school in Nevada, including the Negro School, also the Public Library, and in Cottey College. We are getting busy about the laws governing the handling of food and hope to have something worth while accomplished before another State Convention rolls around. We hope to send a delegate to the convention but it is uncertain as yet. With very best wishes for the success of State Meeting, I am sincerely,

Mrs. Wm. G. FREIDAY, Secretary.

Report of Committee on Amendments

The following report of the Committee on Amendments was presented by Mrs. J. G. Montgomery, Chairman:

At the Second Annual meeting of the Women's Auxiliary the following amendments to the constitution and by-laws are submitted by your committee and will be considered at the general meeting of the Auxiliary.

Constitution

The amendment to Article IV to read:

Section 1. Officers: The officers of this Auxiliary shall be a president, a president-elect, four vice presidents, a recording secretary, a corresponding secretary, a treasurer, and ten other directors.

Section 2. Executive Board: The word "eighteen" to read "nineteen."

Section 3. Elections: The words "A corresponding Secretary" to be eliminated.

(b) To be amended to read: "At subsequent annual meetings there shall be elected by ballot a President-Elect, four Vice President, a Recording Secretary and a Treasurer." The remainder to read as at present.

(c) To read: "A Nominating Committee shall be appointed by the Executive Board at its meeting immediately preceding the Annual Meeting, to present a list of officers to be voted upon at the Annual Meeting. The Committee shall consist of seven members not more than two of whom shall be members of the Executive Board."

Article V—duties of Vice Presidents to read: (b) Vice Presidents shall assist in the organization of the counties assigned them by the Chairman of Organization.

Article IX—to be amended to read: Each county Auxiliary shall pay dues to the State Auxiliary at the rate of fifty cents per capita, at least one month prior to the Annual Meeting of the State Auxiliary out of which the State Treasurer shall pay the National dues.

By-Laws to be amended to read as follows:

Section 1. Committees. Additional paragraph to be added to read: (b) "The Executive Board shall create standing committees to correspond to the standing committees of the Women's Auxiliary to the American Medical Association."

Section 2, to be amended to read: "The Executive Board elected at the Annual Meeting shall meet under the new president at the close of the meeting to plan the year's work."

In addition, the Executive Board shall hold at least two meetings during each fiscal year.

Special meetings may be called by the President or by seven members of the Board."

Report of Committee on Resolutions

The report of the Committee on Resolutions was read by the Secretary as follows:

1. *Resolved*, That since the recommendations of the educational chairman of the Women's Auxiliary to the A.M.A. correspond so closely to the program adopted at our first board meeting in October, 1924, in St. Louis, we continue to work earnestly for better health conditions in rural communities looking forward to obtaining county health nurses and county health units as soon as feasible. (b) That we co-operate with the State Board of Health working under its direction in activities approved by our local medical societies, and that the State Board of Health be asked by the state and county auxiliaries to make suggestions for such cooperation.

2. *Resolved*, That the State Auxiliary attempt to carry out the suggestion of the National Auxiliary Board to double the number of subscriptions to Hygeia in Missouri bringing the number up to 3,000.

3. *Resolved*, That the business of the Executive Board may be conducted by correspondence exclusive of the two

boards meetings to be held at the time of the Annual Meeting.

4. *Resolved*, That in our State Auxiliary the four vice presidents become regional directors of organization each for a section of the state assigned by the Chairman of Organization under her supervision.

5. *Resolved*, That there be created a standing committee to take charge of the Auxiliary Department in the STATE MEDICAL JOURNAL, the chairman to be known as Editor of the Auxiliary Department of the Journal of the Missouri State Medical Association.

6. *Resolved*, That we express our thanks and sincere appreciation to the retiring president, Mrs. M. P. Overholser, and to the other officers and committee chairmen for their faithful and effective work during the past year, to the speakers and honorary guests, who have made our splendid program possible.

7. *Resolved*, That we express our deepest regret at the enforced absence through illness of Mrs. North, Mrs. Bellows and Mrs. Noyes.

8. *Resolved*, That our organization use every possible means to stimulate public opinion in favor of the health education and recreation work under Dr. Curtis so that the legislature may be induced to grant an adequate appropriation for this work.

9. *Resolved*, That the State Auxiliary express its gratitude and appreciation for the delightful way in which the St. Louis Auxiliary has provided for both the comfort and the pleasure of the visitors, and especially for the very lovely luncheon at the Women's Club and the beautiful drive over the city.

Mrs. ROBERT SCHAUFFLER,
Mrs. LUELLA GOODSON,
Mrs. C. T. RYLAND.

On motion the resolutions were adopted as submitted.

The Nominating Committee submitted the following report:

Report of Nominating Committee

We, your Committee on Nominations, beg to submit the following names for your consideration as officers of the Women's Auxiliary for the ensuing year:

Chairman of Organizations, Mrs. Willard Bartlett, St. Louis.

President, Mrs. A. B. McGlothlan, St. Joseph.

President-Elect, Mrs. W. M. Bickford, Marshall.

1st Vice President, Mrs. A. W. McAlester, Kansas City.

2nd Vice President, Mrs. Archer O'Reilly, St. Louis.

3rd Vice President, Mrs. M. P. Neal, Columbia.

4th Vice President, Mrs. Wm. Spaulding, Poplar Bluff.

Recording Secretary, Mrs. M. A. Hanna, Kansas City.

Treasurer, Mrs. C. T. Ryland, Lexington.

Directors:

Mrs. M. P. Overholser, Harrisonville, 2 years.

Mrs. H. F. Parker, Warrensburg, 2 years.

Mrs. R. W. Berrey, Mexico, 2 years.

Mrs. J. G. Montgomery, Kansas City, 2 years.

Mrs. W. F. O'Malley, Webster Groves, 2 years.

Mrs. Frank Hinchey, St. Louis, one year.

Mrs. Walter Baumgarten, St. Louis, one year.

Respectfully submitted,

Mrs. H. F. PARKER, Warrensburg,

Mrs. A. W. McALESTER, Kansas City,

Mrs. H. S. CONRAD, St. Joseph,

Mrs. J. A. TOWNSEND, Eureka,

Mrs. WALTER BAUMGARTEN, St. Louis,

Mrs. H. S. MCKAY, St. Louis,

Mrs. Wm. W. GRAVES, Chairman.

Nominations from the floor were called for by the president.

There being no other nominations it was moved and carried that the corresponding secretary cast the ballot for the officers and directors as submitted by the nominating committee.

On motion adjourned.

ANNA F. MCGLOTHLAN,
Recording Secretary.

MEETING OF THE BOARD OF DIRECTORS

A meeting of the new board of directors was held immediately after the adjournment of the Annual Meeting to consider plans for the next year's work, Mrs. A. B. McGlothlan, St. Joseph, presiding.

Mrs. W. M. Bickford was appointed Chairman of Education.

Mrs. Geo. E. Bellows was appointed Chairman of Legislation.

Mrs. J. G. Montgomery was appointed Editor of the Auxiliary Department of THE JOURNAL of the State Medical Association.

The new board adopted the program outlined by the resolutions committee at the Annual Meeting and decided to push work along the following lines:

1. To work toward improving rural health conditions.

2. To co-operate with the State Board of Health, ascertaining its plans for the state and for each individual county, and following these plans after they have first been approved by the respective medical societies.

3. To continue study programs in the Auxiliaries themselves.

4. To push the extension of Hygeia trying to double the number of subscriptions for Missouri.

Mrs. Hoxie suggested that the letters from the State President to presidents of county auxiliaries express the desire of the State Auxiliary to co-operate with the Federation of Women's Clubs in the health program outlined by its chairman of health. This suggestion was endorsed by the board.

Mrs. Bartlett suggested that at the next Annual Meeting the reports of county presidents be given at the luncheon table in two or three minute talks. This suggestion was approved.

Adjournment.

MRS. M. A. HANNA,
Secretary.

PAROXYSMAL TACHYCARDIA ASSOCIATED WITH FOCAL MYOCARDITIS

The evidence in the case reported by Ralph H. Major and H. R. Wahl, Kansas City, Kan. (*Journal A. M. A.*, April 10, 1926), favors the diagnosis of ventricular tachycardia, although this cannot be positively asserted. The association of focal infection of the tonsils and teeth with foci of infection in the myocardium is very significant. It is probably a tachycardia due to myocarditis, which was the result of the streptococcic focal infection from which the patient suffered. It is of extreme interest that the patient showed a definite early arteritis of the coronary arteries, apparently due to the same cause. He had atheromatous plaques on the aorta, which were far more numerous than would be expected in a man of his age. The authors feel that this case furnishes definite evidence of the role that streptococcic focal infection may play in cardiac and arterial changes.

CANCER OF STOMACH

John William Shuman, Los Angeles (*Journal A. M. A.*, April 10, 1926), reports the case of a man, aged 52, who had a pylorotomy at 33 for cancer, and died a little more than seventeen years later, well beyond the five-year limit of recurrence. Only during the last year of his life did he have severe symptoms. An operation resulting in artificial feedings might have prolonged his life. This he refused. The cause of his death was extensive carcinoma of the cardiac end of the stomach.

COMPARATIVE METHOD FOR DEMONSTRATION OF NORMAL DEVELOPMENT IN INFANCY

Arnold Gesell, New Haven, Conn. (*Journal A. M. A.*, April 24, 1926), describes his method of demonstrating to junior students the developmental characteristics of two pairs of normal infants, respectively 4 and 6 months, and 6 and 9 months of age.

BOOK REVIEWS

MICROBE HUNTERS. By Paul de Kruif. New York. Harcourt Brace & Co., 1926. Price \$3.50.

We confess to not liking the author's manner of attack on these hitherto considered dignified men of science when we first started reading this book. But, after passing it around to our lay friends and finding their delight in the manner of presentation of these great leaders of medical science as really human beings, we have decided that the author's style is all jake. Let de Kruif send these men "a-whoring" after their bugs, hell bent on twisting the tails of these poison spouting demons of death, as long as people will read about them. It's a great book.

The book begins with the story of Leeuwenhoek who was the first man to see protozoa and bacteria under the microscope. The old timers like Pasteur, Koch, Metchnikoff, Behring and Roux are shown not as great heroes, but as hard working, persistent individuals, with all their weaknesses and foolish ideas mixed up with their great discoveries. One of the most interesting chapters is on the work of Bruce in the heart of disease infected, darkest Africa. What a movie scenario this would make! Of our own men, he tells us of "the hellish and dastardly tests" of Walter Reed, and gives us a chapter on one of our greatest and least known Americans, Theobald Smith. And, although de Kruif bewails our lack of knowledge regarding the work of Theobald Smith, he tells us only of his demonstration of the parasite of Texas fever, and says nothing about the fact that he preceded the work of Behring and Roux in the use of a filtered product in immunization and was the discoverer of what Ehrlich termed the Theobald Smith Phenomena.

PRACTICAL HELPS IN THE STUDY AND TREATMENT OF HEAD INJURIES. Adolph M. Hanson, M.D., Formerly Neurosurgeon to Evacuation Hospital No. 8, American Expeditionary Forces. Boston. Richard G. Badger, Publisher. Price \$2.00.

The author presents this monograph, profusely illustrated, as an elementary text upon head injuries on account of the increased number of such cases due to automobile and industrial accidents. The general practitioner meets these cases first. The book does not intend to make neurological surgeons out of every practitioner but, undoubtedly, its contents will indicate to the practitioner the symptoms and management of such cases so that many patients will receive prompt and proper care. Such comprehensive monographs are easily read and very valuable.

E. H. S.

MEDICAL GYNECOLOGY. By Samuel W. Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists, etc. Fourth edition, thoroughly revised. With original illustrations. Philadelphia and London. W. B. Saunders Company. 1924.

A book in its fourth edition always excites interest. It is the problem of the reviewer to determine the reason for its success. In the case of Bandler's book this is obvious. The problems constantly confronting the general practitioner are completely discussed in a manner that is at once comprehensive and practical. Nor is its importance confined to the family doctor. No one will fail to be benefited by reading it.

A. E. H.

TRAINING HEALTH SPEAKERS

The obligation of the physician to aid in the medical and health education of the public is being more and more completely realized. Health talks and addresses constitute an effective means of disseminating useful information, provided they are properly prepared and effectively delivered. The demand from lay organizations for such health talks has grown tremendously. When a local organization, such as Kiwanis, Rotary, Lions' or similar clubs, the Y. M. C. A., chambers of commerce or women's clubs, is planning a program of speeches for its weekly or monthly meetings for the year, the committee of arrangements is likely to include one or more talks on health topics. In Kansas City, for example, there are more than 1,500 group meetings annually, including 122 lunch clubs meeting weekly, parent-teacher associations, fraternal societies, lodges and school assemblies. If only one health talk a year were given to each of these groups, it would require of fifty physicians thirty talks each to supply the demand. The physicians of that city have taken steps to fit themselves for this service. The Health Conservation Association of Kansas City, composed of eight volunteer medical organizations devoted to cancer control, tuberculosis, infant welfare, dental hygiene and other health movements, has appointed a publicity committee. Cooperating with the county medical society, it has organized the Kansas City Public Health Institute to provide instruction for physicians who desire to prepare themselves to give health talks to laymen.

A course of twelve lessons is being given, two evenings each week, consisting of lectures and talks by persons of experience in this work with the assistance of a teacher of public speaking. Seventy-five physicians have enrolled for the course, paying tuition fees to defray the expense. Doubtless some members of the class will find that they are not qualified to become effective speakers. Those who are found to possess talent for such service will find the course helpful in improving their ability.

If the demand for health talks is to be met successfully, physicians must be able to speak effectively about medical and health matters, in language intelligible to a nonmedical audience. Timely topics of vital interest to the audience should be presented in a manner that will not alone impart information but also arouse hearers to active efforts for the betterment of health conditions both of the individual and of the community.—*Jour. A. M. A.*

THE DE FOREST-BALDWIN "ADJUSTMENTS"

Chiropractors and osteopaths in their advertisements today are playing up a newspaper story regarding the alleged results of certain so-called research work done in the anatomic laboratory of the Ithaca Division of the Cornell University Medical College. It seems that Dr. Henry P. de Forest, of New York City, and Dr. Horace G. Baldwin, of Tannersville, N. Y., were permitted to work in the laboratory just mentioned, because they desired to determine whether there was any anatomic basis that would explain the relief of certain symptoms which was said to follow manipulations which they performed. The de Forest-Baldwin thesis seems to be that a wide train of symptoms are caused by "sacro-iliac dislocation" and that manipulations that "reduce" this

result in cure. No member of the staff of the medical college was engaged in the investigation, and according to the professor of anatomy at Cornell, neither Dr. de Forest nor Dr. Baldwin was able to demonstrate any anatomic basis that would explain either the alleged symptoms or the alleged results. Nevertheless, wide newspaper publicity has been given to the de Forest-Baldwin performances. According to these news articles, both of the men have successfully treated thousands of cases by their peculiar methods, and the conditions claimed to be susceptible of cure by these methods are diabetes, Raynaud's disease, sciatica, nervous prostration, neuritis, angina pectoris, etc. The medical profession might, charitably, have supposed that Drs. de Forest and Baldwin had been the victims of some overenthusiastic newspaper reporter, but a letter written by Dr. de Forest during the past few days makes such charitable excuses difficult of application. A woman, suffering from diabetes, who read the newspaper puffs of Dr. de Forest and Baldwin, wrote to the first named physician about her case. Dr. de Forest answered in the following words:

Whether I have discovered a cure for diabetes or not is a debatable question. My medical friends for the most part do not agree with me. The patients, not a very large number it is true, but still enough to enable me to form an opinion, do not agree with my medical friends, for they are getting well, or have entirely recovered. Whether your condition is one that is amenable to this particular form of treatment I could not tell without a personal examination and an accurate diagnosis. This could only be secured by your coming to New York for the examination. If you decide to do this it must be by appointment, and it will be at least two weeks before I can fulfill my present engagements.—*Jour. A. M. A.*

SEYMOUR PLAN FOR DISEASE PREVENTION

At the conference of State and Provincial Authorities of North America, held in Atlantic City, in May, Dr. M. M. Seymour, deputy minister of public health of Saskatchewan and president of the conference, proposed a plan for "drives" against diphtheria, smallpox and typhoid. In brief, the scheme provides for devoting two months each during the coming year to diphtheria, smallpox, and typhoid. Thus, during September and October a survey is to be made of the incidence of diphtheria, and everything possible done to educate the public concerning its nature. At the same time, immunization or vaccination of the individual will be encouraged. The plan proposed was adopted by the conference and, no doubt, will become effective with the month of September. Smallpox is to be the subject for November and December, and typhoid for January and February, 1927. The Seymour plan is obviously an attempt to apply to the prevention of disease the well established psychology of the "drive." Our public has been educated to "crowd action." In the organization, the press, the pulpit, the school and every other medium of education are to be employed. The prevention of communicable disease, even when the cause, the mode of transmission and the method of prevention are thoroughly known, is constantly obstructed by an apparently inevitable minimum of ignorance and carelessness. It may be that these factors can be overcome only by such an intensive drive as Dr. Seymour has proposed. The work will, of course, be carried on in every state and province of the United States and Canada as a separate activity of the local health authorities. Physicians will naturally cooperate in the fullest with any soundly established plan which their local authorities may initiate.—*Jour. A. M. A.*

STUDY OF TWO HUNDRED AND TWO CASES OF HAY-FEVER

George Piness, Los Angeles (*Journal A. M. A.*, Feb. 21, 1925), says that before one can undertake intelligently to diagnose and treat hay-fever, one must have a sound botanic knowledge of the region in which the hay-fever to be treated occurs. To obtain this information, it is necessary to make a complete survey of the flora in this particular locality, a chart being kept on which are noted the various pollen bearing plants, their seasons of pollination, the dates of the first and last pollination, their genera, and whether they are air-borne or insect pollinating. The technic of pollen collecting, as carried on by Piness is described and also the preparation of pollen extracts. It has been his experience in his vicinity that at least 87 per cent of hay-fever sufferers are multiple sensitive, which makes it almost impossible to treat with a single pollen extract as suggested by Walker, who believes that the maximum injection should consist of from 2,000 to 2,500 pollen units, and others who assert that 1,400 units is sufficient. Owing to this frequency of multiple sensitivity, it has been the author's rule to incorporate never more than three pollens in a single antigen, but to prepare as many antigens as are necessary to meet the patient's needs. The initial dosage is best determined by the reactions obtained by testing with the various dilutions of the pollen antigen with which the patient is to be treated. The 202 cases in this study were not only followed through an entire course of pre-seasonal desensitization, but each of them, at the end of their normal hay-fever season, was either seen in person or answered a questionnaire relative to the results obtained. Multiple sensitization has been the rule rather than the exception in the hay-fevers of the Southwest. Of the entire group, only forty-one, or 20.2 per cent., gave reactions to only a single pollen. The remainder were sensitive to from three to fifteen different pollens. Treatment based on the assumption of group reactions would not be as satisfactory as treatment based on the use of the pollens to which the patient is actually sensitive, the reason for this being that patients who showed multiple sensitization gave reactions to pollens of various genera. Piness' results compare favorably with those quoted by others. Sixty patients obtained complete relief of their symptoms. Eighty-one patients obtained practically complete relief, meaning that they were free of symptoms to such a degree that it was possible for them to go about their everyday duties, with very little, if any discomfort, and required no local treatment during their hay-fever season. Forty-four patients were relieved of the severity of their symptoms to the extent of at least 50 per cent as compared with that of former years, meaning that the severity of the attacks was lessened, the duration was shorter, and the symptoms were not severe enough to prevent them from carrying on their daily duties. Seventeen patients obtained no relief whatever, and in one or two instances symptoms were aggravated by the treatment. Reactions incident to treatment occurred most frequently in the patients who obtained the greatest amount of relief.

BASAL METABOLISM IN ORGANIC HEART DISEASE WITH DECOMPENSATION

An investigation was made by Walter W. Hamburger and Morris W. Lev, Chicago (*Journal A. M. A.*, Feb. 21, 1925), to determine what, if any, was the relation of the basal metabolic rate to the various stages and types of cardiac decompensation.

As far as possible, patients with uncomplicated heart failure were chosen, to avoid those in whom the basal metabolism might be influenced one way or another by other factors. The striking finding so far has been the general elevation of the basal metabolic rate in cardiac decompensation, the elevation increasing as the clinical picture of decompensation became worse, and decreasing, and even going below normal, as the heart became compensated. Seventeen patients were observed. Of the total number, thirteen patients, or more than 76 per cent, showed a primary or subsequent elevation of the basal metabolic rate at the first determination, but compensation had already become established at the time the reading was made. The lowest initial increase of the basal metabolic rate in the series was 11.8 per cent above normal, while the highest reached 112.7 per cent above normal. The average initial basal metabolic rate increase in the thirteen cases was 39.1 per cent above normal. The prognosis is better in those decompensated heart cases in which the primary or the subsequent basal metabolic determinations are decreased. The vital capacity is decreased in heart muscle failure, and increases as compensation becomes established. The exact causes of the increased basal metabolic rate in organic heart disease with decompensation have not yet been determined.

OMENTOPEXY IN CIRRHOSIS OF LIVER

Frederick W. Lester, Seneca Falls, N. Y. (*Journal A. M. A.*, April 10, 1926), reports a case of cirrhosis of the liver in which he did an omentopexy according to Narath's method. The abdomen was opened through the right rectus muscle above the umbilicus, and all the fluid that could be secured, about 6,000 c.c., was evacuated and sponged away. A pocket was then made at the right side of the incision by raising the skin and superficial fascia. Into this pocket was inserted a portion of the omentum, about three-fourths of the total bulk, which was securely fastened there by means of several chromic catgut sutures. The portion of omentum, thus brought outside the abdomen, was then fastened around its base to the edges of the opening in the peritoneum through which it came, and the abdomen closed in layers without drainage, four or five silkworm interrupted sutures being used through the skin and fascia as supporting sutures. The result was very satisfactory. Thirty-two months after the operation the patient was able to work from six to eight hours daily at his trade. No injurious effects resulted from diverting so large a part of the omentum from its usual location.

SPONTANEOUS DISAPPEARANCE OF DIABETES

Two cases of diabetes associated with acromegaly with the data on a few other cases that have recently appeared in the literature have given Henry J. John, Cleveland (*Journal A. M. A.*, Nov. 21, 1925), a basis for serious consideration of the possibility of effecting a cure in certain cases of diabetes. In the two cases reported, a cure appears to have been established, as is indicated by the normal glucose tolerance curve secured in the first case, and in the presence of normal blood sugar values on a very heavy diet in the second. These cases add further evidence to the cases of apparent cure previously reported in the literature, and to the experimental work of Copp and Barclay in support of the belief that up to a certain stage the diabetic process is reversible.

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ORIGINAL ARTICLES

BLEEDING MYOMA OF THE UTERUS*

THE MANAGEMENT OF DIFFERENT TYPES

H. S. CROSSEN, M.D.

ST. LOUIS

A bleeding myoma in an exsanguinated patient presents a serious problem—one that requires particular investigation and cautious procedure to avoid a fatality. The patient's weak condition forbids extensive operation for removal of the growth, but at the same time the continued bleeding is further weakening her more rapidly than restorative measures can offset. It is imperative to stop the bleeding, but it is not permissible to use any measure that might exhaust the small store of vitality remaining. In my experience in the handling of these patients I have found it convenient to divide them into classes, or types, representing various modifying conditions. For the decision as to what measures to employ turns largely upon the special local and general condition present. The following clinical groups may be fairly well differentiated: (1.) Myoma originating in the cervix or coming down into the cervix from above. (2.) Small myoma of corpus with the patient in or near the menopause period. (3.) Small myoma of corpus in a younger woman. (4.) Large myoma of corpus in a patient near the menopause. (5.) Large myoma of corpus in a younger woman.

GROUP 1. MYOMA ORIGINATING IN CERVIX OR COMING DOWN INTO CERVIX FROM ABOVE

The cases in which vaginal examination shows a rounded bleeding mass lying in the vaginal vault constitute the simplest type from the standpoint of diagnosis and of treatment. However, the handling of such a condition is not so simple as may at first thought appear. The fact that the patient has suffered extensive blood loss from this growth is a warning that

palpation of it may start another serious hemorrhage. Hence deep palpation for differential diagnosis should be postponed until the patient is in the hospital, or other arrangements have been made for controlling a hemorrhage. In such a case the physician must accomplish two things: first, he must stop the continuous or recurrent bleeding which has reduced the patient to her weak condition; and, second, he must determine whether or not malignancy is present.

In this type I have found the following procedures very satisfactory: With articles ready for immediate packing in case of free bleeding, a careful palpation is made all around the mass, or as far as possible. If a distinct pedicle is found, a strong forceps is slipped in along the examining fingers and the pedicle is securely clamped as high as practicable. With a long curved scissors, used in the same way by touch, the pedicle is cut across below the clamp. With this simple maneuver carried out tactfully, the bleeding tumor may often be removed with but little more disturbance to the patient than by the ordinary vaginal examination. The clamp is left on, a light vaginal packing being placed around it to prevent contact of the metal with the vaginal wall. The clamp is removed in 24 to 48 hours, depending on the thickness of the pedicle. This removal of the pediculated tumor controls bleeding in so far as the bleeding was due to the growth, and a microscopic examination settles the question of malignancy as far as the removed growth is concerned. Also, the removal of the tumor mass blocking the vaginal vault permits bimanual palpation of the uterus and adnexal regions. If no definite mass is felt higher, it is assumed that the pediculated tumor was the main lesion and that there will be no further bleeding. A blood-making regime is then instituted, including diet and medication and, if required, blood transfusion.

A more troublesome type of case is that in which the growth does not present a slender pedicle extending up through the cervical canal, but is attached to the wall of the cervix by a thick pedicle. Here some cutting and suturing will be necessary and, as the extent of the work

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

can be determined only as it is being carried out, preparation for possible extensive work should be made. If the patient's anemia is extreme and the bleeding can be controlled temporarily by packing, preliminary transfusion is advisable. At operation it is of course important to limit the operative work and the anesthesia to the minimum. In these cases morphia-hyoscine analgesia has served me well. I use it as a routine preanesthetic sedative in regular operations. It has worked so well that I seldom find general anesthesia necessary in curettage, specimen excision, intrauterine radium treatments or excision of cervical growths. All manipulations are carried out gently, care being taken to disturb the patient as little as possible. It is surprising what extensive excision of tissue can be made from the cervix under the morphia-hyoscine sleep in most patients, provided rough handling is avoided. In the exceptional cases where it is necessary to add gas or ether anesthesia a small amount will usually suffice.

In these cases of excision of a cervical growth, it is well to do a regular curettage of the uterus also, to exclude malignancy higher. Also, advantage is taken of the patient's partial relaxation to make bimanual palpation of the corpus uteri and adnexa.

In preparing for the presumably small operation, keep in mind that it may possibly be necessary to incise the cervix to a considerable distance. I recall a very troublesome case illustrating this point. A physician brought his sister to me on account of persistent uterine bleeding. Examination showed a small, firm myoma nodule lying in the middle of the cervical canal, the lower part of which was open sufficiently to admit the end of the finger. It seemed a simple matter to dilate the lower part of the cervix and remove the small round mass. The patient was a virgin and anesthesia was necessary to satisfactorily dilate the vaginal opening and the cervix. The lower part of the cervix would not dilate sufficiently to permit catching hold of the mass, so the anterior wall of the cervix was divided about half way up. Examination then showed that the rounded hard surface, palpated in the cervix, was only the lower end of a larger, rounded, movable mass lying in the uterine cavity. In order to get hold of the mass it was necessary to incise the vaginal wall in front of the cervix, raise the bladder off the uterus and continue the division of the cervix up past the internal os. This gave plenty of room to introduce the finger into the endometrial cavity and to determine that the firm myoma was the size of a walnut and had a pedicle. The pedicle was crushed with a clamp and the tumor removed. The clamp was then

loosened and as there was practically no bleeding it was removed. The uterine wound was then sutured with chromic catgut and the vaginal wound was likewise closed. The patient recovered without special disturbance.

GROUP 2. SMALL MYOMA OF CORPUS WITH PATIENT NEAR MENOPAUSE PERIOD

The patient in or near the menopause who comes with persistent bleeding and a moderately enlarged uterus, may have a small myoma or a malignant growth in the uterus. The treatment must be planned to stop bleeding and to settle the question of malignancy. Curettage is the indicated plan in such a case. If the patient has had children curettage can usually be carried out under simple morphia-hyoscine sleep, provided the patient is not unnecessarily aroused by rough handling during the preparation or during the operation. If the curettings show no malignancy no further local treatment is needed unless the bleeding should recur. Curettage, with the carbolic application following, usually checks bleeding temporarily and very often permanently. To aid in this direction the patient is given uterine astringents internally in moderate doses for two or three months. If the bleeding recurs later then radium treatment for myoma is given, one dose of 1500 to 1800 milligram hours usually stopping all bleeding, menstrual and otherwise.

If the curettings show endometrial carcinoma or sarcoma then hysterectomy is carried out if the patient's condition is favorable. If the patient cannot be gotten into satisfactory condition for operation promptly, then radium treatment for intrauterine malignancy is given to check the process temporarily, and hysterectomy is carried out later when the patient's general condition has sufficiently improved.

In those cases of this group in which it is fairly clear from the history and examination findings that the trouble is a small myoma, I usually make the radium application at the same time with diagnostic curettage. If the microscopic examination of the curettings should show a complicating malignancy, another radium treatment may then be given to bring the dosage up to that required for cancer, or the uterus may be removed by operation, as seems best for the conditions present.

GROUP 3. SMALL OR MEDIUM SIZED MYOMA OF THE CORPUS IN A YOUNGER WOMAN

In these patients well within the childbearing period, radium treatment and X-ray treatment are to be avoided because of their destructive action on ovarian function. It takes such a large dose of radiation of any type to check

the activity of a myoma that the ovaries must necessarily be affected. Even if their function is not destroyed, the developing ova may be much damaged. A very serious question now being generally discussed is the extent to which moderate radiation of the pelvis, by radium or X-ray, is responsible for fetal monstrosities born later. Until this question is definitely settled it is advisable to avoid radiation for the control of bleeding in the childbearing period.

When a young woman comes with bleeding from a small or medium sized myomatous uterus, I usually give a course of internal medication consisting of uterine astringents or endocrine preparations or both. If this medication takes care of the bleeding it is repeated from time to time as needed. If the bleeding persists in spite of the administration of various internal remedies, then curettage is carried out, including a carbolic application to the uterine interior. The curettings are examined microscopically to ascertain what change if any is taking place in the endometrium. After curettage, the internal medication is continued as needed to regulate the menstrual flow.

It is only when serious bleeding persists in spite of these measures that more radical methods of treatment are employed. The only radical treatment advisable in these younger women is operative removal of the growth, and this is undertaken reluctantly because of the possibility of having to sacrifice the uterine function. The operation is of course begun with the hope that conditions will be found suitable for myomectomy and preservation of the uterus, but the possibility of conditions being found quite otherwise must be kept in mind when deciding on operation.

The question of how far it is advisable to go in myomectomy is an important one and not always easy to answer. An extensive myomectomy opening the uterine cavity carries more risk of fatal peritonitis than does a hysterectomy. At the same time preservation of the possibility of future childbearing fully justifies considerable additional risk. Both these factors vary greatly in different cases. The risk varies with the size and location of the growth and especially with preceding and accompanying conditions. The probability of childbearing after a myomectomy varies with the age of the patient and the proportional integrity of uterine function remaining. All these factors must be considered in deciding whether the patient's interests will be best served by myomectomy or hysterectomy. In those cases in which the additional risk is slight and the chance of subsequent pregnancy and parturition is good, myomectomy is clearly indicated. In those cases in which the risk of myomectomy is great and the

chance of future childbearing slight, hysterectomy is of course indicated. It is in the borderline cases that the decision as to which operation is advisable becomes difficult, particularly those cases in which preservation of the uterus would give a good chance of future pregnancy, but myomectomy is usually risky on account of the size and situation of the growth or on account of accompanying conditions. The decision turns largely upon the amount of risk attached to myomectomy in that particular patient. In estimating the risk of myomectomy, when the abdomen is open and the situation shows that the uterine cavity must be invaded, I have come by experience to attach more importance to preceding and accompanying conditions than to the size and location of the growth. And the important point about preceding and accompanying conditions is whether or not they have resulted in the presence of pathogenic bacteria in the uterine cavity. If the uterine cavity has never been invaded by parturition nor inflammation nor instrumentation, we can count on its being sterile. If it has passed through parturition without infection and has for several months been free from abnormal bleeding or other disturbance, practical sterility may be fairly assumed. On the other hand, if after the cavity has once been invaded there is recent persistent bleeding, there is a very good chance of pathogenic bacteria being either in the uterine wall or multiplying in the bloody culture medium extending up from the vagina. This chance is greatly increased if recent vaginal packing to control the bleeding has been employed.

In connection with this particular point I recall three very instructive cases of myomectomy of rather large submucous myoma with serious bleeding. The first patient was a young unmarried woman without previous uterine disturbance. Operation showed a fist-size corpus uteri, symmetrically enlarged by a myoma deep in the anterior wall. It proved to be a single soft myoma as large as an orange. Its inner surface formed about half of the anterior wall of the uterine cavity. The overlying endometrium came away with the tumor, opening the cavity widely. The uterine wall was greatly hypertrophied as is usual with a deep seated growing myoma. The uterine wound was closed with particular care to giving a strong scar. The patient made a good recovery and later married and has passed through a normal pregnancy and parturition.

In the second case I enucleated a somewhat larger tumor with considerable difficulty because it would not shell out but had to be cut away. The patient was a young married woman without offspring but very anxious for

children. She was the daughter of a prominent surgeon and as the large uterus was laid open in the extensive and difficult excision, the father who was standing by, expressed doubt as to the wisdom of trying to preserve the uterus. However, he left the decision to me, and I finally succeeded in excising the growth and satisfactorily repairing the uterus. The patient recovered without particular incident, and has since passed through a normal pregnancy and delivery.

In both the cases just mentioned the uterine cavity had never been invaded and hence was sterile. The third case furnishes a striking illustration of what may take place in a uterus that has once been invaded. This patient had been delivered of her first baby five months previously. The pregnancy was normal, except that there was an associated myoma of the uterus which gave no trouble during pregnancy nor during labor. The labor was conducted in a hospital by one of our best obstetricians. The puerperium and subsequent course was uneventful with the exception of a persistent slight bloody flow and some free bleeding at times. There was no indication of infection at any time. About five months postpartum the bleeding became serious and for some days before I saw her, vaginal packing had been necessary to control the bleeding temporarily and even that had become ineffective.

At operation the uterus was found enlarged symmetrically by a deep seated myoma in the posterior wall which, on removal by myomectomy, proved to be a soft myoma the size of an orange. It showed some red degeneration, but most of it was bloodless and leathery and of a light slate color. The endometrial surface of the tumor was intact and there was no sloughing and no evidence of inflammation at any point. The uterine wound was sutured in the usual way, and the patient was put to bed in good condition.

The patient's condition continued good until the next day, when the temperature rose to 103°. The second postoperative day the temperature went to 105 and the pulse rose accordingly, reaching a rate of 140 but with fair volume. There was no evidence of peritonitis at this time, but there was an increasing discharge from the uterus, which showed the streptococcus hemolyticus in vast numbers. We were evidently dealing with an infection of extreme virulence starting in the uterus. A drainage tube was introduced through the cervix to provide drainage of the infected cavity, and among other things the patient was given antistreptococcus serum. The next morning the temperature had dropped to 100.5 but in the afternoon it rose to 105.5. The patient's con-

dition went steadily from bad to worse in spite of the numerous measures employed (including blood transfusion, peritoneal drainage, serums and mercurochrome intravenously), and she died of peritonitis on the sixth postoperative day.

Postmortem examination, with bacteriological data, showed clearly that the virulent hemolytic streptococcus infection had started in the uterine cavity and progressed through the wound in the uterine wall to the peritoneal cavity and then throughout the peritoneal cavity. All blood cultures taken during life were sterile. At autopsy cultures taken from the heart blood, the spleen and the kidney were sterile.

My conclusion in regard to borderline cases of myomectomy opening into uterine cavity, are as follows:

a. Hysterectomy rather than deep myomectomy is advisable in cases of recent hemorrhage requiring vaginal packing. In such a case where myomectomy is much desired, operation should be postponed (if the hemorrhage can be sufficiently controlled by palliative measures) for a month or more beyond all vaginal disturbances, to give time for auto-sterilization of the genital tract.

b. In a case of persistent bleeding requiring deep myomectomy, preoperative bacteriological investigation of the vaginal contents is advisable. Any infective bacteria in the uterus are likely to show in the vaginal or cervical contents. It is preferable to avoid invasion of the endometrial cavity in this investigation as that might introduce fresh virulent bacteria into the operative field.

3. Degenerative changes found in the humor during operation are an indication for hysterectomy rather than deep myomectomy. This is of course a relative indication, depending somewhat on the type and extent of the degeneration. Infection or malignancy, or a condition suspicious of either, make removal of the uterus imperative. Circulatory changes in the growth if at all extensive make hysterectomy advisable, because of the likelihood of diminished resistance in the adjacent tissues. Small areas of circulatory degeneration well removed from the margin of the growth would hardly constitute a contraindication to myomectomy in a patient anxious for preservation of the uterus and with everything else favorable.

GROUP 4. LARGE MYOMA OF CORPUS WITH PATIENT NEAR MENOPAUSE PERIOD

In such a case with extensive bleeding from a large myoma filling the pelvis and lower abdomen, the plan of treatment depends on the general condition of the patient. If the anemia

from blood loss is only moderate and her condition otherwise is good, immediate removal of the tumor and uterus is the safest plan. Temporary measures only prolong the blood loss and thus further weaken the patient. Curettage or other intrauterine manipulation is not advisable in such a case. The indications for hysterectomy are already clear, and curettage would only increase the danger by the intrauterine tearing of tissue and the possibility of introducing fresh bacteria. The question as to whether or not there is a complicating malignancy in the endometrium does not need to be answered in order to decide on operation, for hysterectomy is already indicated by the large bleeding myoma. As soon as the uterus and tumors are removed at operation they are to be laid open and inspected, so that if there is any evidence of malignancy the cervix, if it has been left, and the adnexa may be removed in the subsequent steps of the operation. If the patient's anemia is sufficiently marked, pre-operative blood transfusion is advisable.

A more troublesome subclass of the cases now under consideration is that in which the bleeding anemic patient presents also some serious heart lesion or kidney lesion or other general complication. In such a case immediate radical operation is out of the question, and temporizing measures must be employed. The pressing indication is to stop the blood loss but the measures employed must be selected circumspectly to keep within the patient's small margin of reserve strength. Vaginal packing under antiseptic precautions and repeated every second or third day is very helpful in some cases in diminishing the flow while the patient is being built up by tonic diet and medication, by hemostatic remedies (calcium, thromboplastic injections) and by blood transfusions judiciously employed. After a week or two of this building-up process the patient is usually in condition to stand with safety a curettage and radium application under morphine-hyoscine sleep. But the decision as to whether or not to employ this treatment, which in this case is only for temporary effect is still to be made. The decision turns largely on the patient's general condition. If she is picking up so rapidly that she will soon be ready for radical operation, then intrauterine disturbance for temporary effect should be omitted and the radical operation carried out as soon as practicable. On the other hand, if it is evident that radical operation must be postponed for a long time or perhaps omitted altogether, then the less radical measures are to be employed. The curettage will show whether or not there is a complicating malignancy in the endometrium, and the radium treatment will usually check the

bleeding over a considerable period whether it is due to a submucous myoma or to malignancy. If complicating malignancy is found, that is an indication to employ radical operation as early as possible or if the operation is not possible soon, then to give additional radiation by radium or X-ray or both.

For a number of years I have been trying out both X-ray and radium in the control of uterine bleeding in these critical cases and in my experience radium (properly employed) has proven much more effective in controlling the bleeding. As a rule it has proved also a less disturbing factor in the nutritional problem, which is so important in such cases. The gastrointestinal upset from deep X-ray therapy, even when given in graduated doses by the experienced expert, occasionally proves a serious matter in these low vitality cases. However, there may be an exceptional combination of circumstances in which X-ray is preferable. I recall one patient in the menopause with a large bleeding myoma who had such a marked anemia and badly acting heart that I feared to subject her to even the slight upset of diagnostic curettage and radium treatment. It was imperative to stop the bleeding which was further weakening her, so X-ray was tried. It was given very carefully in gradually increasing doses to avoid any marked intestinal disturbance. It checked the bleeding temporarily and thus enabled us to build up the patient to a fair operative condition. Later the bleeding recurred in spite of X-ray therapy and the tumor was then removed while the patient was in good condition. This was a risky thing to do, to give X-ray treatment for uterine bleeding without first excluding malignancy by diagnostic curettage. But it was given only for temporary effect, operative removal to be employed as soon as the patient could be gotten into condition for it. At operation the tumor showed circulatory degeneration but no malignancy, much to my relief.

Another recent case was very instructive. The patient came with free bleeding from what was considered probably a carcinoma of the endometrium. Diagnostic curettage showed no malignancy, indicating that the bleeding and moderate uterine enlargement were due to a small submucous myoma. The conditions were such that it seemed either radium or X-ray would readily take care of the trouble. The patient preferred X-ray, so that was employed. But the bleeding continued in spite of the X-ray, which was pushed to large doses, and hysterectomy was finally employed. Examination of the uterus after removal showed that the bleeding was due to a submucous myoma the size of a walnut, situated at the fundus.

The phrase "properly employed" noticeable above in connection with radium, merits some emphasis. Radium is a very powerful remedy, its destructive action in some respects extending even beyond that of the knife, and its effective use in serious diseased conditions requires as much, if not more, experienced skill and special study. A great deal of radium work is doing harm. Without an intimate knowledge of the tissues involved and the reaction of those tissues to the radium under the greatly differing conditions of disease, as acquired by actual work and observation and study over a long period, it is impossible to give the patient the best service. This applies especially of course in cancer of the uterus but also in these serious myoma cases. Radium work in the uterus involves the complex problem of so using the "chemical knife" as to eliminate disease to the greatest possible extent and yet not injure adjacent organs, which are in intimate contact with the diseased structure or perhaps are already invaded by the growth.

GROUP 5. LARGE MYOMA OF CORPUS IN A YOUNGER WOMAN

In such a patient preservation of function assumes great importance. If myomectomy is possible, that of course preserves the chance of future childbearing. If removal of the upper part of the uterus with the tumor is necessary, menstruation may still be preserved if the line of excision can be placed a considerable distance above the internal os. If future pregnancy and menstruation must be sacrificed the ovaries can still be preserved. In young women, measures destructive of ovarian function must be avoided both in radical and in palliative treatment. This eliminates radium and X-ray. Outside of this feature, the treatment for large myoma with serious bleeding in this class is about the same as for the preceding class.

In regard to curettage in suspected malignancy, it may be well to correct a serious false impression, which has been caused by the ill advised statements of certain leaders in the general profession. That false impression is that curettage should not be employed in suspected cases of uterine malignancy because of the risk of causing metastasis. Now the question of possible metastasis from specimen excision or curettage should be considered in a broad way; that is, from various angles and with due consideration of the other and greater dangers present in these cases.

The two important factors in saving a patient from death by malignant disease are, first, early diagnosis, and second, prompt and effective treatment. Early diagnosis of cancer of

the uterus depends on microscopic examination of an excised specimen or of curettings. If the diagnosis is delayed until clinical symptoms and signs clearly indicate the nature of the trouble, it is probably too late to effect a cure even with the most radical treatment.

It has long been recognized that an incision through a cancerous area or curettage of the area, carries a certain amount of danger of spreading any infection present, including the cancer. This long-recognized risk, necessary in these serious cases and fairly well provided against in the technic, has been brought forward recently as a new discovery and one which contraindicates specimen excision and diagnostic curettage in all forms of malignant disease. There seems at present to be considerable hysteria on this subject, amounting in some quarters to a phobia in which attention is focused on a single phase of the subject to the exclusion of other and more important phases. This serious condition is due largely to certain leaders in the profession who have permitted themselves to make loose statements so sweeping in character or so ambiguous in construction as to promote erroneous interpretation.

There is unquestionably some danger in any incision, in spite of all the precautions of modern surgery. Specimen excision and uterine curettage are no exception to the rule. In a cancerous area there are cancer cells and usually infectious bacteria, consequently particular care should be taken immediately to seal opened lymph vessels and bloodvessels by thermic or chemical cauterization. With this precaution, I am satisfied that the danger of specimen excision or uterine curettage in a doubtful case is far less than the danger of not making such diagnostic excision or curettage.

For years gynecologists have been fighting for early diagnosis in uterine cancer. One of the essential features of such early diagnosis is microscopic examination of tissue removed for that purpose in doubtful cases. Many women who are alive today owe the preservation of life to such early microscopic diagnosis. And others have been saved from a serious and often fatal operation through the differentiation of their troubles from malignant disease. As before stated, there is some danger in any excision of tissue but under proper precautions the danger of excision is so slight and the danger of delay so great, that to neglect this decisive diagnostic measure is to neglect a serious duty we owe to the patient. Furthermore, the evidence indicates that the principal danger of an examination, in promoting distant metastases or peripheral extension from a malignant growth, comes not from specimen excision but from the manipulation and squeez-

ing of the growth. In an instructive article by Wood¹ substantial experimental evidence is introduced. He found in animal experimentation that metastasis depends on two factors: first, on the length of the time the tumor is in the body; and, second, on massage or manipulation of the tumor. Diagnostic excision of tissue without massage had no appreciable influence in causing metastasis.

CONCLUSIONS

My working conclusions on this subject are as follows:

a. If in a doubtful case excision of tissue from the cervix or intrauterine curettage is necessary to an early differential diagnosis, it could be carried out at once, without unnecessary manipulation of the growth, and the opened lymph spaces should be immediately closed by thermic or chemical cauterization.

b. The effort to limit such diagnostic excision or curettage to patients on the operating table and prepared for radical operation, is doing harm. It excludes from early differential diagnosis that large class of doubtful cases in which the local disturbance is very slight and the patient hesitates to go through the expense and mental strain of preparation for the radical operation on the mere chance that there may be beginning malignant disease. And yet it is in just this very class that differential diagnosis is most effective in saving life.

The false impression referred to above is producing deaths by cancer not only by limiting diagnostic excision in the earliest stages but also by leading to repeated manual examinations and manipulation of the suspicious area in an effort to decide the diagnosis without tissue excision. Both reason and experimental evidence indicate that pressure manipulation of a cancerous area is much more productive of metastasis than simple excision of tissue with proper precautions.

In resumé: The treatment for myoma with serious bleeding varies with the different types of cases as follows:

1. In those cases where the myoma originates in the cervix or comes down into the cervix from above, removal may usually be effected under morphine-hyoscine sleep with very little disturbance to the patient. However, the manipulation may start severe bleeding or extensive work may be found necessary to remove the growth. Consequently, efforts at removal and even deep examination should be postponed until the patient is in a hospital or otherwise prepared for any emergency that may develop.

2. A small bleeding myoma of the corpus with the patient in or near the menopause may usually be most satisfactorily handled by radium treatment with diagnostic curettage.

3. A small bleeding myoma of the corpus in a younger woman is preferably taken care of by uterine astringents or curettage or, if found necessary, by myomectomy when conditions are favorable. In such a case radium and X-ray should be avoided because of their serious effect on ovarian function.

4. A large bleeding myoma of the corpus in a patient near the menopause is preferably taken care of by hysterectomy if the patient's general condition will permit. If palliative measures must be employed temporarily, radium treatment with diagnostic curettage is the method of choice. If exceptional conditions make this not practicable, X-ray may be employed. When thus using X-ray, keep in mind that the question of complicating malignancy has not yet been settled.

5. A large bleeding myoma of the corpus in a younger woman should be taken care of by operative removal—myomectomy if practicable, hysterectomy if necessary. Radium and X-ray are to be avoided in a young woman because of their destruction of ovarian function.

University Club Building.

TREATMENT OF ECLAMPSIA*

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KANSAS CITY, MO.

Treatment of eclampsia resolves itself into three distinct groups. The radicals use vigorous operative means to produce delivery of the fetus as quickly as possible. Following the economic law "to every action there is an equal opposite reaction," the conservatives swing to the other extreme refusing all operative procedures and rely totally upon routine medical therapeutics. There is a third large group leaning toward conservatism yet mixing worthy known operative methods at times to reduce shock and long continued strain from a weakened patient. To this class of individuals I declare my membership.

Treatment divides itself into four main divisions: (1.) Elimination. (2.) Control of cardiovascular symptoms. (3.) Scheming for the opportune time, place and way for delivery of the fetus. (4.) Control of nervous symptoms.

Evidence points to accumulated toxins of unknown origin as the etiology of eclampsia which in turn hinder the functions of the organs of excretion. Rigorous elimination is de-

1. Journal American Medical Association, Sept. 6, 1919.

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

manded and constitutes the main treatment regardless of all other items. Magnesium sulphate by mouth continued repeatedly and for a long period has no equal. For those in coma gastric lavage with Epsom salt left in the stomach or injected into the muscles or veins and repeated in six hours, is necessary. Colon lavage, not quarts but three to five gallons of bicarbonate solution, removes toxins, stimulates stagnant lymph and acts as an arterial dilator. This is extremely valuable when Epsom salts do not act readily or vomiting is troublesome: Heavy sweats are too weakening for the small values received, but hot blankets or the more modern electric blanket should keep the skin moist and warm. Hot bottles to the loins possibly aid kidney function. The kidneys filter best with a blood pressure between 150 and 90. Venesection or blood pressure reducing drugs act as eliminants only by reducing the pressure to the optimum for the kidney action. Digitalis for a failing myocardium works best as the blood pressure falls. Fluid intake is necessary throughout. Avoid saline solution in the presence of edema and retained blood chlorides. Ten per cent. glucose by mouth will rehabilitate liver cells degenerated by the toxins. Intravenously its diuretic power is small unless the blood pressure is held reasonably low. Water or one per cent. soda bicarbonate is best by mouth unless it increases vomiting. Fluid intake and output should be carefully charted. Output in fluid may become great, however, without a corresponding decrease in the retained blood constituents. The clinical well being of a patient generally presents itself before the edema or the retained nitrogen products decrease.

Only in cases of failing myocardium do low blood pressures occur. For such and for right heart embarrassment, phlebotomy is indicated. Control of the blood pressure is the basic cardiovascular treatment. The heart itself is only of secondary importance and generally shows improvement when the pressure is lowered. Venesection of 1000 cc. is commonly used. Its action is a temporary reduction of blood pressure by which the kidney elimination is bettered. (It also dilutes the blood.) The loss of vital blood is a great price to pay for the desired result and should be used only when less radical methods fail. Tincture veratrum viridi hypodermically every one half hour should first be tried to reduce the pressure temporarily to the optimum for the kidney. It performs the same function without loss of vital blood. If three doses fail to control the pressure a small phlebotomy of 250 cc. generally results in aiding the veratrum reduction which also acts readily thereafter. A failing myocardium is

thereby relieved of its heavy load and digitalis will then be of extra value for heart tone.

All eclamptics should be in a hospital, in a single quiet room with a shaded light. Bright lights and noise pull the trigger of a convulsion. Keep patient on the side with the head low and a mouth gag handy. A nurse should sit by the patient watching closely blood pressure, pulse, and to prevent aspiration of fluid during a convulsion.

No patient, regardless of clinical symptoms, is cured or free from danger until some time after delivery. Patients who will die unless immediate radical procedures are performed, will die anyway. All should receive the test of elimination and blood pressure reduction while possible operative means for hastening or shortening labor are being considered. Labor often starts in naturally as a protection mechanism of the body. Rupturing the bag of waters is desirable in a partially dilated cervix. Bags in multipara are of value but should be questioned seriously in primipara. Accouchement force of the cervix, Bossi dilators and metallic metreynters are devilish inventions. Full cervical dilation is demanded and engagement of the fetal head desired. Version should be considered only in very unusual cases. The shock may be prodigious. Low forceps are desirable to decrease the second stage strain of expulsive effort. High forceps, as usual, are very dangerous. Cesarean section is indicated in primipara with long hard cervix or for the contracted or obstructed pelvis. It is acknowledgment that obstetric skill has failed. Chloroform pushes a patient one step closer to the grave. Ether and gas oxygen are preferable as anesthetics.

Nervous symptoms, such as irritability, flashes of light and convulsions, are symptoms only of the disease and require secondary care. Morphine, gr. one-fourth, generally aids and only theoretically prevents elimination. Anesthesia for a convulsion is wasted time. Eclamptics do not inhale until the convulsion has ceased. Lumbar puncture will often reduce convulsions regardless of high blood pressure and general edema.

In summary, given a patient at home and having convulsions from eclampsia:

Insert mouth gag of any sort. Place on her side with the head low.

Give morphine gr. one-fourth, hypodermically.

Take blood pressure.

Rush to hospital and while waiting for an ambulance force 2 oz. magnesium sulphate by mouth.

Inject 10 drops of Tr. veratrum viridi.

Give an enema or continue the same into a colon lavage.

In one half hour, if blood pressure remains the same or not reduced 40 to 60 points, repeat the veratrum.

At the hospital:

Order Tr. veratrum, or veratrone 10 drops, hypo each one half hour until blood pressure reduces. After the third dose if the pressure does not respond, remove 250 cc. of blood from the vein and repeat the veratrum which will bring results.

Demand magnesium sulphate 1 oz. by mouth each two hours unless vomiting hinders.

If vomiting seriously, 2 teaspoons each half hour may be tolerated. If still vomiting or in coma, give gastric lavage of one gallon of soda water and leave 2 oz. Epsom salt in the stomach. Also irrigate the colon with 3 to 5 gallons of soda water.

Chart intake and output of fluids.

Urge 8 to 16 oz. of water each hour. If the nurse succeeds in doing this double the order.

Keep a nurse in the room continuously.

Catheterize.

Examine the condition of the cervix. If long and hard in a primipara consider Cesarean section seriously. If partially dilated and soft, rupture the membranes if possible. Avoid shock. Often, labor starts in over night. Providing the blood pressure is controlled, operative manipulation is not immediately desirable. If occasional convulsions continue, consider lumbar puncture to relieve brain pressure.

Morphine, chloral and bromides control only less important secondary symptoms and are not of prime value in saving the life.

Diet, at first; water, then milk, then cereals, then a "soft" tray.

Force elimination for weeks if necessary. Control the blood pressure with veratrum indefinitely unless vomiting complicates.

Increased urinary output and controlled blood pressure are very favorable signs.

During the last five years the radicals are less assertive, the individualist less radical and the conservative more positive.

In conclusion eclampsia calls for care, personal attention, and experience. It cannot be well treated by the routine of unchanging type-written rules of the conservatist, nor the shock producing methods of the radical. The patient should be treated as an individual as well as the disease.

OCCIPITO-POSTERIOR PRESENTATION*

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ST. LOUIS

In presenting a paper on a subject so shop-worn as this, there is no belief that we will be able to bring forth anything new, but rather to refresh our memories and to bring back some of the things that we have possibly forgotten.

The etiology of occiput posterior positions is ascribed to various conditions, but roughly they may be divided into (1) those which are due to some interference with the normal flexion of the head and (2) those which are due to some factor which mechanically prevents the rotation of the head through the right arc.

In the first class, in which there is disturbance in the flexion, the following reasons are ascribed for this condition: (1) Military attitude, with the forces so applied that the lever action necessary for flexion is nullified since both levers are equal. (2) Slightly flat pelvis so that more resistance is offered to occiput than sinciput with the resultant deflexion; or the brow meets resistance first, with the resultant deflexion.

In the class of persistent occiput posterior due to mechanical interference with the rotation the causes may be, location of placenta, tumors in uterine wall, funnel pelvis, as well as full bladder and rectum. Prolapse of fetal parts ahead of the fetus may also be factors in the nonrotation of head. Whether the head enters in the oblique, as commonly taught, or in the transverse, as maintained by some authors, all these factors are effective. Of course there are some cases in which the head enters the pelvis primarily in the posterior position with the occiput posterior. It is our personal belief that these cases are more commonly due to a small child and often combined with a pendulous abdomen. If we go into the matter closely we will find in a number of cases that we cannot find any apparent cause for the condition, but this is nothing new in medicine, for there are many things of which we do not know the cause.

The frequency of this condition has been variously stated. Edgar states it to be four per cent. Williams sixteen per cent. I am inclined to the belief that Williams is slightly high, while Edgar is too low.

The prognosis in occiput posterior positions both for mother and babe is of course slightly graver than in anterior positions. To the mother, on account of the frequency of op-

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erative interference of some sort, and because of exhaustion of mother with following low resistance to infection, and more frequent and more serious laceration, hemorrhage, or account of secondary inertia. To the child, on account of prolonged labor and operative interference. Edgar gives the fetal mortality in posterior positions as 9 per cent. while in anterior positions it is 5 per cent.

Two varieties of occiput posterior position are recognized. First, those in which the occiput progresses down the canal during labor, when there ensues either arrest of labor with the sagittal suture in the transverse; or complete rotation of the occiput to the hollow of the sacrum. Second, those in which the head stays in the posterior position with no engagement.

The diagnosis of occiput posterior position is made by the following: the breech in fundus, the back being found in the flank, while the small parts are found anterior and in the marked posterior position, or may be even found on the same side of midline as the back. The abdomen presents, as a rule, a contour in which the abdominal distension is a more gradual slope from the symphysis than is the case in anterior positions.

Upon vaginal examination, findings depend upon how far the labor has progressed. The small fontanel is usually found higher up or at least on a level with the large fontanel and is of course found posterior. Later in labor if there is a transverse arrest, the two fontanels are in the transverse. It is in occiput posterior positions that the location of an ear is of so much help, for if labor has progressed long, excessive moulding may and often does obliterate fetal land marks.

Treatment of persistent occiput posterior position varies with the two varieties we have mentioned and also with the individual physician who is handling the case. Of course, in the second variety the policy that is to be pursued when the pelvis is of normal size and baby is also not overly large is that of watchful waiting. If we recognize a disproportion between fetus and the pelvis, then the treatment is that which would follow regardless of the position, in either version or Cesarean section, depending upon how great that disproportion may be. Personally, when we have a head high up, not engaged and occiput posterior position in cases where the disproportion does not indicate Cesarean section every effort is made to conserve the bag of waters, and as soon as we have considerable dilation, version is resorted to. There are men who advise rotation of the primary occiput manually, by a combined manipulation in which the hand is inserted in

the uterus with the head in the palm of the hand and the fingers behind the posterior shoulder and with the outside hand aiding. After this rotation, the head is led either manually or by the use of the forceps into the pelvis and labor is allowed to go on. I am inclined to believe that this treatment verges on the theoretical and I am able to see several objections: (1) It necessitates rupture of the bag of waters if it is standing. (2) If the bag of waters has ruptured then you will encounter tremendous difficulty in rotating the body of the child, since the uterus will be in close approximation to the body. (3) There has been some underlying factor in this malposition, that has not been corrected. (4) The fetus is apt to return to its original position with the recurrence of pains. (5) Necessitates an additional anesthetic.

We believe it is better to preserve the bag of waters and do a version. If the bag of waters has ruptured, we believe the best procedure is waiting, giving the chance for labor to engage the head. The labor is conducted by means of rectal examination and then when we see that engagement will not take place we have left to us the Cesarean section, preferably extraperitoneal of some type.

It is well in passing to say that the use of the Kielland forceps to accomplish rotation has been recommended for this type of case by some men. The Kielland forceps with its lack of pelvic curve, thin blade, and its peculiar sliding lock would be easier to apply than the Naegele type forceps, but I have yet to be convinced that it is to be used for this purpose. In that variety in which the head has become engaged there are several maneuvers which are practiced to a more or less degree of success. Recognizing that one of the causes of faulty rotation lies in the lack of flexion the simple procedure of pressing upon the sinciput during pains may be able to correct the fault and thereby allow rotation. Another method is by pushing the head up out of the pelvis and by combined manipulation rotating the body, as mentioned in regard to flating head, again re-engaging the head manually or by use of forceps. Again, I personally am not very enthusiastic about this method although men in much better position to say favor it.

The use of the Scanzoni Fritch method of double forceps application appeals to me most in those cases in which the sagittal suture is in the oblique diameter in posterior position. In this method the forceps are applied in the usual manner, that is, the forceps are applied the opposite oblique of the pelvis to the one in which we find the sagittal suture. Thus in R. O. P. position when the sagittal suture is found in

the right oblique diameter, the forceps are applied in the left oblique and so adapted to the baby's head that the blades are fitted to the ears of the child. Then traction is applied to the head and at the same time rotation through an arc of 90 degrees, if possible, so that the sagittal suture then lies in the left oblique with the occiput anterior

This of course causes the forceps to become inverted and a second application of forceps to an occiput anterior position follows with an ordinary forceps delivery. Occasionally, as you know, when the forceps are removed after rotating, you will find that the head has rotated back to posterior position or to the transverse position. Therefore it has been my custom in the past few years, when attempting a Scanzoni maneuver, to have two pair of forceps boiled up, so that as I remove the posterior blade after completing rotation the opposite blade of the second pair of forceps is slipped into position. And when the second blade of the forceps used in the Scanzoni has been removed, the second blade of the extra pair of forceps is put in position, completing my second application. By using this second pair of the forceps, one is always able to retain control of the head so that any retotation posterior is prevented.

In those cases in which the head comes to rest in the transverse position, and cautious use of pituitary extract has not been able to cause further advancement and rotation, we have the condition called by one author "deep transverse arrest." In this type of case, when the sagittal suture lies in the transverse, it is my practice, whether correct or not, to apply the forceps in the oblique diameter of the pelvis so that one blade lies over the posterior parietal bone, and the other over the anterior malar bone. Then traction and rotation are carried out. Sometimes the rotation will take place within the forceps blades, when simple traction is applied. But if this does not take place, then as the descent of the head takes place the forceps are slowly slipped around so that at the outlet the forceps come to lie in transverse position. This method I know is open to criticism on account of the slipping of the blades, but probably is the result of my association with DeLee. Williams, on the contrary, in transverse arrest, still applies the forceps at right angles to the sagittal suture causing the blades to fall in position over the ears of the child. When downward traction and rotation are applied to the forceps, when the sagittal suture gets in the anterior position at the inlet, the forceps are in the transverse or the normal position for delivery. I have found the application of the forceps in this manner to be much harder than

the first mentioned way, but possibly this is due to my lack of experience or lack of art.

It is in the deep transverse arrest that the Kielland forceps certainly fill a need and are certainly entitled to a good trial in the hands of American operators. As has been told by various authors the Kielland forceps is certainly a distinct variation from our more common or Naegele type. They have very slight pelvic curve, in this way reverting back to the time of Smellie; they also have a peculiar sliding lock which allows them to fit closely over the head. They are applied in these transverse positions in the anterior posterior diameter and after rotation of the head to the anterior posterior diameter of the pelvis, and on account of the lack of this pelvic curve, this rotation is accomplished with much less danger of injury to the vaginal soft parts. In the application to the head they are applied to the head in the same manner that Williams applies them to the transverse arrest, but on account of the lack of pelvic curve this application is much easier.

As a final complication in persistent occiput posterior we come to those cases in which, in spite of our effort, we are not able to convert into more favorable occipital presentation, or in which we are not able to disengage the head to perform version, and the woman will not deliver. This usually occurs when the head is on the pelvic floor, and the thing to be remembered is always to keep the head in flexion; and to accomplish this, our traction is to be slightly above the horizontal. In primipara it will always be necessary to do an episiotomy. The occiput is delivered over the pelvic floor first, after the brow has stemmed behind the symphysis, after delivery of the occiput, the face is then delivered under the symphysis and delivery completed in the usual manner.

CONCLUSIONS

1. Occiput posterior are frequent.
2. Infant mortality is high.
3. Maternal injuries are frequent.
4. Kielland forceps offer a method which holds much promise.

Lister Building.

BREECH PRESENTATIONS*

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In order to understand the etiology of breech presentation, it is necessary to understand the present day theories in regard to the cause of

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fetal positions in general. It has been accepted as a final argument for many years that a fetus submerged in water would float with the head down. Later it was observed that in those cases in which the fetus had more play, in which the uterine wall was in less rigid contact with the fetus, we have a higher percentage of breech presentations. Hydramnias, twin pregnancy, hydrocephalus, ananecephalus and early pregnancy, are examples of conditions in which we have imperfect contact between the fetus and the uterine wall. We frequently observe a breech presentation early in pregnancy that spontaneously changes to a head presentation later in pregnancy. It is an accepted fact, therefore, that muscular adaptability has much to do with the causation of the fetal presentations.

The percentage of breech to head presentations is not high,—only about one in forty or fifty. This is fortunate, as the death rate for the fetus is very much higher, while the death rate for the mother is slightly higher than in head presentations. The percentage of mutilation and invalidism of the mother is also high, but there are few statistics on this point.

The diagnosis of breech presentation at term is usually easily made. However, there are times when the diagnosis is very difficult. A very fat woman, a large quantity of amniotic fluid, and twin pregnancy present difficulties. The location of the fetal heart sounds and the absence of the head in the pelvis are helps to the diagnosis. The head can usually be felt in the upper abdomen, and can usually be distinguished from the buttocks. Pressure on the head is supposed to slow the fetal heart sound. I have been unable to take advantage of this symptom and I am convinced that it can only be of use in slender women with relaxed abdominal walls and little amniotic fluid.

Rectal or vaginal examination usually settles the question. The X-ray, where available, seems absolutely infallible. We have two plates, one of a breech at five months, the other (the same woman in the same pregnancy) a head presentation at term. All plates are not clear but a fair picture will always settle the diagnosis.

Most authors say that the danger to the mother's life is not much greater in the breech than in the head presentation, while severe mutilations are much more common. I cannot believe that these conclusions are justified, even in a well equipped hospital. Labor lasts longer, intravaginal and intrauterine manipulations are more common, and our gloved hand is never entirely clean after it passes the vagina. These manipulations are major operations, and the result for the mother can hardly be as good as

in the spontaneous delivery without examinations. The condition of the woman who has had the test of labor and failed to deliver the head, is far worse than the corresponding condition in the head presentation. All these facts convince me that the mortality for the mother must be greater in the breech than in the head presentation.

The fetal death rate is very much higher. Probably one in ten children are lost in primipara, and one in twenty-five in multipara. This is a very high percentage of mortality and should be studied with care.

Fetal death comes in two ways. (1) Asphyxia. (2) Other injuries. Asphyxia occurs in many ways. (a) The aftercoming head, as it enters the pelvis, presses on the cord. This happens very soon after the umbilicus is born. The arbitrary rule that the birth must be completed within eight minutes after the birth of the umbilicus, is probably not reliable. (b) A knot in the cord, a short cord, or a cord around the baby's neck, may cause asphyxia. (c) When the test of labor fails, due to disproportion, the head remains above the true pelvis while the rest of the fetus has been born. The result is asphyxia. (d) The premature separation of the placenta is probably the most frequent cause of asphyxia. Normally the placenta becomes detached because the suddenly emptied uterus shrinks, even before the post-delivery contractions, the shrinking of the placental site causes an accumulation of blood between the placenta and the uterus, which is followed rather promptly by separation. This change does not occur in the head presentation till the child is in a position to breathe. In the breech, however, the head is frequently high in the pelvic canal when these uterine changes take place. Detachment takes place before the child has access to the aid and asphyxia follows.

Until we understand just why the muscular adaptability of the uterus occasionally fails to produce the desired head presentation, it is going to be impossible to prevent the 3 per cent. of breech presentations that we now see. Sometimes in a primipara, but more frequently in a multipara, a breech can be converted into a head presentation by external manipulation. Even then it repeatedly returns to a breech.

The management of a breech delivery, after all efforts to make external version have failed, may present a very simple or a very grave problem, depending on many circumstances. A multipara with a fetus that is not very large, with a fair quantity of amniotic fluid and whose membranes do not rupture till we have complete dilatation, presents no problem at all. She will deliver spontaneously if the obstetrician is not too meddlesome. The ability to estimate

the size of the fetus is of great value to the obstetrician at all times, but in the breech it is particularly important. If the child is larger than the average, if the shoulders and the head are particularly large, we have difficult deliveries. When we have a short cord, a knot in the cord, or the cord wrapped around the head repeatedly, we are liable to have trouble. The incomplete and slow dilatation that follows premature rupture of the membranes is a disagreeable incident. Our real troubles, however, come with the primipara. The manipulations of the shoulders and head that are necessary in most hard breech deliveries are particularly difficult in the primipara, even after the cervix has been completely dilated. The cervical dilatation is usually a much slower process in the breech than in the head presentation. Here the very high episiotomy incision on both sides is quite a help.

A primipara with a large fetus and a fairly small pelvis is unhesitatingly given the test of labor when we have a head presentation. Should the test fail, we still have a living child and can still deliver by means of a Cesarean section. Should the test of labor fail in the breech, however, we have a dead child born with the exception of the head and must crush the head to complete the delivery. The result is a dead child and a mutilated and probably infected mother. All elderly primipara with large children should have an early Cesarean section. Every primipara should have a Cesarean section if we have a large fetal head and a small pelvis, or if for other reasons we expect trouble with the after-coming head. In this respect the treatment differs materially from a similar condition in the head presentation, as in the head presentation we can give the test of labor.

It would be of interest to know, (1) if we shall ever be able to prevent breech presentations; (2) if we shall ever be able to convert all breeches into heads, by external or internal or combined manipulations; (3) if our technic will ever improve so that breech extractions will be as safe as head; (4) if so, can we develop this technic in the home as well as in the hospital.

Wall Building.

SIGNIFICANCE OF MECONIUM IN THE VAGINA DURING LABOR

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Dr. Margaret Schulze, of San Francisco, in

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1922 thoroughly reviewed the literature of this condition, beginning with the article of Voltern in 1687 in which he stated that German midwives considered the passage of meconium a certain sign of fetal death in utero.

Schwartz, in 1858, claimed that passage of meconium meant, if not death of the fetus, at least danger of its death during delivery.

Jesse, in 1888, wrote from his study of 3340 labors in Ahlfeld's clinic that the passage of meconium alone was no indication for forced or hurried delivery.

Rossa, in 1894, from an exhaustive study of less than one hundred cases, agreed with the conclusions of Jesse that this was not such a serious symptom.

Gijrot, in 1920, published a study of 6435 vertex presentations with passage of meconium, from which one may conclude this is not a symptom to cause great alarm and a hurried delivery.

Dr. Schulze's conclusions based on the study of about 3300 cases were:

The passage of meconium by the child during labor is in a large number of cases entirely independent of fetal asphyxia. The passage of old meconium at the time of rupture of the membranes is of no prognostic value as to the later development of asphyxia. Fresh meconium with rupture of the membranes, or later, in labor, may be, or may not be, associated with asphyxia; in the latter case, changes in the fetal heart sounds are present also. Meconium appearing after other signs of fetal distress is frequently a sign of the onset of very deep asphyxia and the child may perish even though delivery be very rapidly accomplished. A strikingly high proportion of over large children pass meconium, in most cases without serious significance. The cause of passage of meconium in cases without asphyxia cannot yet be stated.

The passage of meconium in breech presentations is the common rule and is the result of pressure on the baby's trunk, not from the relaxation of the baby's sphincter occasioned by distress nor approaching asphyxia, and has no special significance, the diagnosis having been previously determined.

The rather common acceptance of the appearance of meconium in vertex presentations as an urge to hurried delivery of the baby no longer tempts me to act with undue haste in ending the labor. Frequently the writer has rushed into a quick delivery, goaded on by the appearance of meconium, to find a baby with no trouble and no approach to asphyxia.

Fetal heart changes are to be given great consideration, and if accompanied by the passage of meconium, the urgency for delivery is made quite positive.

There is no reason to think the exhibition of quinin in the mother has any influence on the passage of meconium from the babe before birth.

Rialto Bldg.

PRENATAL CARE OF A SYPHILITIC PREGNANT WOMAN*

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The purpose of this paper is to call your attention to the management or prenatal care of a syphilitic pregnant woman in private practice. The greatest advance made in obstetrics in the last decade has been the more careful observation of or the prenatal care given a pregnant woman. This makes it possible to obtain a complete history and do a thorough physical examination early in pregnancy. Unfortunately many doctors see the patient for the first time at the onset of labor, or when some pathological condition arises before that time.

Numerous statements are made and statistics bear them out, that the greatest cause for fetal death is syphilis. Dr. W. Williams (New York and London, 1924) makes the observation "that syphilis is the most frequent cause of fetal death. It is responsible for 26.4 per cent. of the 705 fetal deaths that occurred in 10,000 consecutive labors. This included all stages from viability until two weeks after birth. Syphilis was discovered in 40 per cent. of dead born premature infants and in approximately 80 per cent. of the macerated children."

The important factor in making a diagnosis is the accurate and complete history. Physical and laboratory findings follow in importance. Where the Wassermann test is not taken as a routine many of these cases would go by undiagnosed were it not for the careful history and physical findings. The greatest difficulty in handling prenatal cases is that of making a diagnosis of syphilis,—not the treatment of it. It is easy in charity clinics to tell a patient she has syphilis and order treatment. However, with private patients it requires often times more tact and a positive diagnosis should be derived at only after numerous check-ups on your findings. Syphilis and its results may appear in any stratum of society. When found, again it requires tact to find the etiology. As a rule there is good cooperation from patient and husband and treatment can be given to lessen the dangers of the disease. It is true that families are often broken up,—not to mention the difficulties that the doctors may have in receiving their proper financial settlement. Every case varies in the handling and the chief object of the doctor is to see that proper treatment is given, although the patient may be unaware of the actual diagnosis.

In taking a history the following should be inquired into: If pregnant for first time, the

family history should be carefully gone into. Numerous headaches especially at night, skin trouble, such as nonitching rash, sore throats, possibility of venereal sores, general body aches, etc. If patient has had previous pregnancies, then inquire if any miscarriages, premature or still births. It may be difficult to obtain a history in regard to a macerated fetus. Vignes (Paris Medicale, 1924) gives the statement made by Vinay, "that constitutional conditions become aggravated during syphilitic pregnancy. Asthenia, digestive disturbances, nausea, loss of appetite, palpitation, headache, vague pains and hystericalgia are intense. If they occur in a young married woman they are suspicious of syphilis."

The physical examination, when any initial sore or chancre is found, examination for treponema should be made. Old scars of the skin may be found, especially over the shins. Pupil reflexes should be noted for iritis may be present. The mouth may reveal mucous patches or scars around uvala. The teeth often give the first positive findings, especially in congenital cases. Enlarged liver or spleen may be found. The father of the child should have a thorough examination for signs of syphilis. If other children, they should be studied.

Most cases that are found in pregnancy are of the latent type. However, without the Wassermann test many cases would slip by. This being a positive, gives us the first evidence and starts us on a further hunt for findings. Bear in mind the physical findings and history being negative, a positive Wassermann does not make the diagnosis, but with positive clinical findings a negative Wassermann does mean syphilis and treatment should be given. J. H. Sequeira (*Lancet*, 1923) states: "It would be advisable to obtain a Wassermann reaction in every prospective mother, bearing in mind the fact that in a small percentage of cases there will be a positive reaction where no clinical evidences or history of syphilis are present." Fraser and Impey (*Amer. Jour. of Syph.*, Apr. 1925) state that "every prospective mother should receive a routine Wassermann examination. If serologic finding is negative in face of definite clinical suspicions, clinical evidence should be given definite preference and the woman the benefit of treatment throughout pregnancy. Fordyce and Rosen (*Arch. of Dermat. and Syph.*, March, 1924) state: "The systematic application of the Wassermann test in obstetrics has rendered invaluable aid in uncovering many cases of unsuspected infection and the employment of proper treatment during pregnancy has shown that a healthy child may be born of a properly treated syphilitic mother."

In a recent communication from Dr. F. S.

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Newell, Boston, he says that he does not make a routine of taking the Wassermann test except in those cases that have signs suggestive of infection.

Since doing routine Wassermann tests in my own practice, out of a series of 220 patients, four positives were found. Three were without clinical findings and in two of these the husband's blood was negative.

Treatment. This should be done by a competent syphilologist. There is no doubt that many cases are under treated and much harm results. Pregnancy complicates perhaps the usual routine. Dr. C. C. Dennie (*Diseases of Children*, J. A. M. A., 1924) recommends that pregnant mothers should be treated as intensively as possible, giving statistics to show that those who had received two or more courses during pregnancy, the children were serologically and physically negative.

The usual routine prenatal care is given these patients except that it is advisable to examine the urine for albumen and take the blood pressure before every treatment. If the patient comes to the doctor in the last month of pregnancy and is found to be infected, it is advisable that no treatment be then given until after confinement. The reason is that the kidneys and liver are working to full capacity and the possible irritation may prove disastrous.

The course of treatment given to my patients usually starts out with neoarsphenamin 0.35 intravenously at weekly intervals for six to eight doses. The dosage is increased to 0.45. Then this is followed by one-half to one grain mercuric chloride intramuscularly at weekly intervals until the beginning of the ninth month. Mercury alone cannot do the work so every patient must have arsenic as well.

CONCLUSIONS

1. Routine observation for signs of syphilitic infection of pregnant women.
2. Routine blood Wassermann.
3. Routine examination of father and children of family.
4. Early and active syphilitic treatment of expectant mothers for the good it can do for the new born.

1325 Rialto Building.

DISCUSSION

DR. GEORGE GELHORN, St. Louis: When Dr. Swahlen and I found that we were to open this discussion jointly, we agreed that we would choose different papers so as to avoid repetition. It is, therefore, my privilege to discuss the paper read by Dr. Aschmann, and I do it with all the more pleasure because I believe that the subject which he has brought before us is of the greatest possible importance to all of us.

It is unfortunate that in obstetrics theory and practice are often so far apart. The management of the syphilitic expectant mother illustrates this point only too well. Every physician knows that syphilis is a most widespread disease. Every doctor has heard the famous dictum of Osler that "syphilis is one of the six best killers." Every doctor realizes the baneful effect of the disease upon children who survive the first few days or the first few years of life; and he has been told over and over again that our homes for the feeble-minded and our insane asylums, our jails and penitentiaries are filled with congenitally syphilitic individuals. Is it not, then, logical to conclude that such a state of affairs should be changed at the earliest possible moment, that is to say, during pregnancy? We have abundant proof that, if syphilis were recognized and treated during pregnancy, the outlook for both mothers and children would improve immeasurably. But such efforts, promising as they are, have remained sporadic. In one hospital in this city we tried to institute a routine Wassermann test in all obstetrical patients, whether they were the wives of millionaires or of hodcarriers; but the idea suffered shipwreck because the doctors objected to it, as if it were a dishonorable thing to do.

On the other hand, in our Municipal Prenatal Clinics these routine Wassermann examinations have been made for years on all patients, with the result that somewhere between 15 and 20 per cent. of the women, if I am correct, were found to have latent syphilis. Let Dr. Kerwin and Dr. Liese, who carried out this work, and only recently reported it, tell you how they instituted immediate and energetic treatment in these patients with positive Wassermanns; and, not limiting their efforts to the women, how they investigated their husbands and had the latter treated as well in a great many instances. You will perceive at once what a splendid missionary work this was, and how the health of the entire family was thereby safeguarded. And, as to immediate results, the record of the Municipal Clinics show a marked reduction in the number of macerated or premature babies.

The insistence of Dr. Aschmann on routine Wassermanns is highly to be praised. That this test has its limitations does not detract from the value of his contentions. For obscure reasons, the Wassermann reaction behaves very eccentrically during pregnancy. Sometimes it is negative when the patient is surely syphilitic; and again, it may be positive when the patient is probably not syphilitic. But, granting a certain unreliability of the test in pregnancy, I still maintain that it is better to treat a patient once too often than not often enough.

Moreover, there are certain clinical indications which Dr. Aschmann has enumerated and which the careful observer who devotes sufficient time to his patients will elicit in the majority of instances. I need not repeat these clinical signs and symptoms; but I would like to add one which for many years has attracted my attention. I refer to leukoderma cervicis,—those whitish, and at times only very faint, spots on the outside of the neck and shoulders which represent remnants of old cutaneous lesions and are found much more frequently in women than in men.

I willingly admit that the signs of syphilis, as a rule, are not well marked; they do not stare you in the face; at best, they are merely suggestive enough to arouse your suspicions, provided of course you approach the subject with a suspicious mind. And so important seems the subject to me and so urgent its proper management, that I would wish to have such a suspicious mind cultivated by the entire profession, a regular syphilophobia; for then so many cases of syphilis would not be overlooked.

The timely discovery and treatment of syphilis in pregnancy means the saving of the babies' lives. In addition, the syphilitic expectant mother herself is in danger if her disease is not treated. Most of the text book writers have lost sight of this fact. In many instances, the effect on the maternal organism is pronounced. Fever and cachexia may develop. In labor, dystocia may occur if the cervix uteri happens to be the seat of a syphilitic lesion which leads to rigidity of the os. Laceration and infection may be the result, as has been attested in a number of cases in literature.

All outside manifestations are greatly aggravated. I remember very vividly a patient whom I saw years ago, with an enormous gumma of the vulva, a tumor easily as big as my two fists, which effectually closed the entrance to the vagina. The massive vegetations were furrowed by deep irregular crevices in which bacteria led a secure and luxurious existence. The odor was sickening. A delivery through the vagina was entirely out of the question. It was impossible to introduce one finger, let alone a child coming out. We treated this patient for months most intensely but without result. Tertiary lesions do not respond well to specific treatment. The tissue changes, as a rule, are permanently established. Fibrous tissues once fully formed cannot be melted away but must be removed surgically; and this, of course, could not be done prior to delivery. I therefore assigned the patient for Cesarean section upon the onset of labor. The operation was performed skillfully and rapidly by my successor on the service, but the patient died. She was unable to stand any kind of strain; and, moreover, infection had gotten into the uterus from below though no examination had been made.

Primary inertia in labor, and postpartum hemorrhage after delivery may be the result of an untreated syphilis.

As to treatment, there was a popular belief, until a very few years ago, that salvarsan could not be administered in the last few weeks of pregnancy. At no time was there any sound foundation for this idea, but it existed and did a good deal of harm by preventing vigorous treatment. Today we know that we must treat the patient as energetically and completely as possible, in whatever stage of pregnancy we meet her. Even if we do not cure her completely at the time we introduce enough arsenic into her to help the baby at least to be born alive, and after birth the baby will receive additional arsenic from the mother's milk, because arsenic goes over into the milk.

I have listened with pleasure and profit to Dr. Aschmann's propositions, and I heartily second them. I appreciate that the difficulties of treatment in private practice are greater than in hospital service but, as Dr. Aschmann suggested, they can be overcome by a little tact. A woman who has lost two or three babies is only too willing to fall in with your suggestions. Of course, you would not come out badly and sow discord and disharmony in the family, but you will tell her that her blood is not just right, which is perfectly true; and she will permit you to take a Wassermann and give her the necessary treatment. Personally, I can say that I have had very little difficulty, thanks to a little well meant camouflage.

In the interest of syphilitic mothers and their offspring I earnestly hope that Dr. Aschmann's suggestions will find a large and determined following among the practitioners of our state.

DR. LEE DORSETT, St. Louis: To date I have treated 54 cases of convulsions of eclampsia by the use of intramuscular injections of a 25 per cent. solution of magnesium sulphate; our maternal mortality has been

6 per cent. the lowest so far published in the treatment of eclampsia.

The treatment consists of an initial injection of 15 to 20 cc. of a 15 per cent. solution into the buttocks and repeated every one to two hours as the severity of the case may indicate; in some of my cases I have used as high as 200 cc. in twenty four hours without ill effect. In some of these cases there were no convulsions after the first injection.

Those of the cases that were not in labor, labor was induced by a bag. I am absolutely opposed to Cesarean section and accouchement force in the treatment of these cases.

Of the cases we lost, the first died of cerebral hemorrhage on the twelfth postpartum day; the second was practically moribund when she entered the hospital, having had 28 convulsions; the third developed pulmonary edema after delivery, and the fourth died in coma having had a total urinary suppression for 48 hours.

My opinion in regard to the action of the drug is that it acts first as a sedative and secondly it relieves the marked cerebral edema that causes the convulsions.

Magnesium sulphate has been used by the brain surgeon in certain cases of severe intracranial pressure and by the pediatrician in certain cases of nephritis with convulsions.

The only treatment that we use is hot moist packs, and of late the intravenous injection of glucose (100 cc. of 10 per cent. solution).

It is my opinion that the use of morphine and chloroform is not justified; the latter is an extremely dangerous drug and produces the same changes in the liver as are found in eclampsia.

None of our cases were bled and I see no excuse for this procedure except to weaken the patient.

DR. WM. KERWIN, St. Louis: To those of us who are interested in the unborn child and its welfare and the welfare of the mother, Dr. Aschmann's paper bids a special appeal. We are today building hospitals for the care of crippled children, giving them fair consideration and yet we neglect the unborn child!

Dr. Gellhorn was sponsor for me coming before you to give some information about the prenatal care of our patients at a certain clinic in St. Louis. In over 1,800 Wassermanns done on women who came in for prenatal observation we found an incidence of about 10 per cent. positive syphilis, where the signs of syphilis were wanting. The Wassermann positive cases are treated irrespective of the time they come into the clinic, no matter how late they are in their pregnancy. We feel that if we can give them one or two injections of salvarsan we have at least done something and all cases are treated. We handle no cases who refuse treatment.

We have yet to see a single accident or bad result due to the antiluetic treatment to a pregnant woman, even though we carried the treatment up to the time of labor. One outstanding case, a woman who had had thirteen still births, was put on treatment after her Wassermann proved positive and she gave birth to a robust, healthy, living child.

It would be folly for any man to say that a routine Wassermann must be done, because in the rural districts that is not practical, but there can be no reason why a more thorough examination should not be made, and when such outstanding feature or sign of syphilis such as Dr. Gellhorn mentioned is present and the history points to the possibility of syphilis in that woman then a Wassermann should be done. However, I believe the Wassermann test is somewhat unreliable in pregnancy.

I was much impressed with the conservatism that

Doctor Gaylor preached in the handling of breech cases. I, too, am a believer in the external version where you make the diagnosis of breech presentation, and if you establish the habit of examining your pregnancy cases thoroughly and often it is not difficult to make a diagnosis of breech presentation.

I do not agree with him in his surgical suggestions. Dr. Gaylor advises doing the double episiotomy. I believe this a bad thing to do because if you fail to get healing a dropping back of the rectum takes place and you will have a most deplorable condition of the perineum. A unilateral episiotomy properly done should suffice. Furthermore, he suggests Cesarean section where there is a large head and in certain breech cases. Well, I believe that we who call ourselves specialists are rather inclined to make it difficult for men doing general work in obstetrics to practice the art of obstetrics. We are trying to make it a big problem. It is a big problem, but it shouldn't be made an operative problem in all cases. The natural route should be used at all times when possible and I am not for doing Cesarean section because these conditions prevail. It must be done in certain instances, but not just because you happen to find a child in breech position, or a child with a large head.

Dr. G. D. ROYSTON, St. Louis: It has been indeed a pleasure to listen to these papers, and the discussion. There are just three points in Dr. Pendleton's paper that I should like to emphasize. One is the elimination of urine. The elimination of urine is a very important factor not only as a curative measure but as a preventive. I have never seen a patient have a convulsion who has had an abundant urinary output regardless of the qualitative findings. In every case of eclampsia that I have seen, there has been a diminished urinary output preceding the convulsion. Furthermore, Bumm has taught us that an increased amount of pale urine excreted is the best prognostic sign that occurs. A second point is the importance of blood pressure. The high blood pressure without variation and often present before onset of pregnancy, I think is much less significant than the one that steadily increases; the latter is always significant and always dangerous. We see many women with a blood pressure of one hundred and sixty, seventy or eighty, where it remains throughout the pregnancy and nothing happens. We cannot explain many of these conditions; but the ones that show the increase first during the pregnancy are always significant.

The third point is about the dangers of chloroform. Chloroform is a distinct danger as a poison in toxemic conditions. To give it to the eclamptic patient; to the woman who is having a long, hard labor, has taken little food, or fluids, is very dangerous, and the convulsions that have then followed its administration are not necessarily acute yellow atrophy or postpartum eclampsia but they are frequently cases of chloroform poisoning.

The points on occiput-posterior positions have been well covered by other speakers. I agree with Polak in that probably half of all presentations are occipito-posterior at the onset of labor. When you see them at the end of labor most of them have rotated spontaneously forward. It is my custom to watch my patients through the entire duration of labor, and I should say that forty per cent. or more are occipito-posterior presentations early in labor. It doesn't matter in what position the patient lies. It doesn't matter what you do during labor. If the head is much extended it rarely rotates spontaneously. If the head is fairly well flexed and you will wait long enough, the occiput will usually rotate spontaneously forward and, as Dr. Swahlen remarked, it is uterine inertia rather than the presentation that

causes us so much trouble. As to the Scanzoni application of forceps, I was surprised that no one mentioned Bill's modification of Scanzoni. Bill applies forceps to the sides of the child's head, as though he would deliver the latter with the occiput in the posterior position. He places the palm of his hand on the occiput and uses the forceps as a handle attached to his hand, bringing the forceps in a wide sweep to the opposite side, thus flexing and rotating the head, after which he makes a little downward traction to fix the head in the new position; removes the forceps and makes a second application before completing the delivery. It is important to remember two points; do not use any undue force and never make any traction until after the head is flexed and rotated.

The Scanzoni method involves traction before flexion and rotation are completed and usually results in deep tears of the levator muscles in primipara, often extending to the bone along the white line, even when there is no external tear visible. Bill's modification is a great improvement over the original Scanzoni maneuver.

The higher mortality in breech positions can be lessened by following the formula laid down by Bumm. First: Do not touch the breech until the latter distends the vulva. Second: Wait until you can see all of one buttock and part of the other. Third: Have the patient's hips moved to the edge of a table. Do not try to deliver her in bed. Fourth: Do a deep medio-lateral episiotomy in every primipara and many multipara and I agree with Dr. Kerwin that the double episiotomy is much less satisfactory than the single incision. Fifth: Inject a full cc. of some pituitary preparation at the time of expulsion of the breech. Sixth: Have all force exerted from above by an assistant or you, yourself, pushing on the after-coming head. The entire expulsive force is directed from above downward. Since following this method, I have lost but two children in twelve years in breech deliveries; one was where the after-coming extended head was delivered by forceps and death resulted from a fractured skull. When all expulsive forces come from above, I have seen no instances where the arms were extended above the head.

Potter, of Buffalo, who is undoubtedly the most clever version man in the world today, uses his external hand to make marked pressure on the after-coming head; he has the child's chest resting on the palm of internal hand which thus keeps him informed as to the fetal heart beat and indicates to him the condition of the child and the need for much or little haste in completing the delivery.

Most of our trouble in breech presentation is caused by making premature traction on the breech or legs, often before the cervix is fully effaced; hence the advisability of waiting until the breech appears spontaneously partially through the vulva.

If most of the expulsive force comes from above it is much easier and safer.

Donald Macomber, Boston (*Journal A. M. A.*, Nov. 21, 1925), emphasizes the importance and frequency of low fertility in the male and urges the value of careful study in each case. Such a study must include a thorough microscopic examination of the secretions and of the spermatozoa as well as palpation and inspection of the organs. It is to be supplemented by an exhaustive inquiry into the habits of the patient's life, with particular reference to those of sex. It is only on the facts accumulated in this manner that satisfactory opinion as to fertility and a rational plan of treatment can be outlined.

SPECIAL ARTICLE

THE NAVY AND COMMERCE

[In connection with the celebration of Navy Day, October 27, the Navy League of America has sent us an article descriptive of the importance of the Navy in promoting the commerce of the United States. We believe many of our members will be interested in reading this paper and therefore we publish it.—Ed.]

It is a fact, increasingly recognized by all intelligent citizens of this country, that the margin of their prosperity is coming to be more

absorbing vast quantities of our surplus products. China, the Near East, Central Asia, Africa, South and Central America immediately occur to the mind.

In all these places except those in the Americas the peoples inhabiting them have not full sovereignty. There are spheres of influence and concessions. Practically speaking, there is not equal opportunity for all for trade and commerce. In the Americas there is equal opportunity. This is because the United States, rigidly adhering to the Monroe Doctrine, has effectually prevented the domination or exploitation of any American country by outside



Fig. 1. An important element in American seapower. The U. S. S. Richmond, a new type of light cruiser under full speed ahead during recent engineering trials.

and more measured by the volume of their foreign trade. Our country has passed the development stage. Our frontiers are now the oceans. We have become a creditor nation. We have bred and otherwise acquired one hundred and ten millions of people. We have created enormous manufacturing and agricultural facilities. If our people are to maintain their present splendid standard of living—if they are to continue to be fed and clothed and housed better than any other people in the world—they must secure outlets abroad for free and profitable disposal of the surplus products of their farms and factories.

There are many countries and localities in the world that would be progressively capable of

powers and at the same time has refrained from dominating or exploiting these countries for her own advantage.

The United States has for three quarters of a century endeavored to extend the principle of the Open Door and equal trade opportunities for all—to include China and other undeveloped or semideveloped localities. We are attempting to apply it to Turkey and the Near East. We have not been overly successful, and yet if we could get the principle accepted by world opinion, it would be a most tremendous forward step toward permanent world peace and stability.

The recorded history of the world from the earliest times right down to the present, pre-

sents a uniform record of nations engaging in bloody war to secure advantages in foreign trade. They have fought for concessions, for spheres of influence, for the right to solely exploit or to dominate or to annex.

A nation like Great Britain, or France, or Japan, that needed to secure additional markets for surplus products, has inevitably been forced to resort to force to get them.

The United States abhors acquiring wealth by such methods, even though they have been considered perfectly legitimate for a great many hundred years. We don't intend to seek wealth by the sword. We are willing to pay for our prosperity with the sweat of our brows and the labor of our hands and brains, and not with the groans of subject peoples.

What is the alternative? We are bound to establish our foreign trade—sooner or later the energy and genius of our young men will insure that—and yet we don't want to achieve it with the sword.

The logical, the simple alternative is the firm prosecution and insistence on our right to trade freely and without unjust discriminations wherever we will so long as we obey the laws of the lands concerned. In addition and of essential importance, we must back that principle up with seapower.

Seapower in itself is not aggressive. Coupled with great and imposing land armaments, such as were possessed by the late German Empire, it is a sign of aggression and could rightfully be viewed with alarm by other nations. Our small army and our clear record of 150 years since the Declaration of Independence is proof positive of our pacific intentions toward the rest of the world.

We don't need a great and imposing seapower to achieve our ends. We don't need an overwhelming force of ships of war capable of crushing the other navies of the world. We do need a healthy, vigorous Merchant Marine capable of providing bottoms for at least half our trade and backed up by an efficient navy equal in force to any other in the world.

We have more latent power than any other nation in the world. We are for the present the richest nation in the world. If our latent power is to react to our advantage there must be some outward and visible sign of it. Everything worth having in this world must be paid for.

No business man who expects to succeed would put his affairs in the hands of his principal competitors and expect them to administer them to his advantage and not to their own. Yet that is precisely the situation in which many of our citizens seem to want to place this country. They are against measures calcu-

lated to produce a Merchant Marine, though it would seem fairly apparent that if we depend on our principal trade competitors to provide the ocean carriage for our goods, there will come a day when those competitors will use their control of this prime necessity to advance their interest at the expense of our own.

There are many people who want to reduce the Navy to the point of impotency forgetting that an impotent United States must be fair game to any other nation possessed of the requisite force to dare to take advantage of her. China, with 450,000,000 of people, is prostrate in the dust because she has not had either the ability or the will to secure the necessary degree of respect for her rights and interests by her neighbors in the world.

We don't require a Navy because we expect to use it against Great Britain or Japan or France or Italy, or any other nation in the world. We do need a Navy as an outward and visible sign to the rest of the world that we are prepared and ready to sturdily and fearlessly support our just rights and the just rights of the least of our citizens whenever and wherever they may be jeopardized.

"When a strong man armed keepeth his palace, his goods are in peace.

"But when a stronger than he shall come upon him, and overcome him, he taketh from him all his armour wherein he trusted, and divide his spoils."

Jesus Christ spoke the words quoted above, as reported by St. Luke, nearly nineteen hundred years ago. The philosophy they express is strictly applicable to the needs of the United States to-day.

A sturdy, self-reliant United States, adequately armed to support justice and right, need have no fears for its future security and prosperity.

A weak, slothful United States, impotent to either defend its borders or advance the lawful interests of its citizens need have every fear for the future.

The one inevitably would prove an unsurpassed force for preserving the peace and stability of the world. The other would inevitably jeopardize that peace and stability. Great wealth that is defenseless, always is provocative of attack, whether it be possessed by a nation or an individual. We have countless examples to prove that statement both in the history of nations and the history of individuals. It must never be forgotten that history always repeats itself.

Comparison of our seapower with that of Great Britain and Japan indicates that the United States is a secondclass seapower, and moreover, a secondclass seapower that more

nearly approaches the thirdclass seapower, Japan, than it does the firstclass seapower, Great Britain.

So long as we remain a secondclass seapower we remain a secondclass commercial power.

We can never develop a foreign trade second to none other unless we secure that foreign trade with a Merchant Marine and a Navy second to none other.

We can never insure ourselves from violent dislocations of our economic fabric caused by wars in the world, even though they may not directly concern us, unless the outward and visible sign of our seapower is so sturdy and secure that no conceivable belligerent or set of belligerents dare incur our displeasure by trifling with or jeopardizing the just rights and interests of our people.

Remember that seapower is not aggressive and is primarily defensive.

It may be asked, what will it cost to become a firstclass seapower? Are we not already groaning under a crushing load of taxes to maintain the seapower we have?

The crushing burden of taxation when closely examined is a good deal less than many people suppose. Although there have been no exact statistics since 1922, the average citizen of the country pays each year in taxes for the support of his town or city, county, state and the federal government a total of approximately \$70.00. Of this total amount, 4 per cent. or \$2.82 goes to support his Navy. This is the crushing burden of taxation citizens are asked to bear on account of the Navy.

Another dollar per capita per year, wisely expended, would in from seven to ten years put us far on the road to a seapower the equal of any other in the world.

Undeniably it is a great deal of money—about a billion of dollars spread over ten years—but it will be the best and most profitable investment this country or any other country ever made. Our citizens in the factory or on the farm will get it back in increased and secure prosperity an hundred fold.

TESTIMONIALS

We "see by the papers," as Mr. Dooley would say, that Mrs. Alice Roosevelt Longworth has consented to the use of her photograph as an advertisement "for a certain well known beauty cream." We learn further that Mrs. Longworth thus joins a notable gallery made up of "such well known beauties and social leaders as Queen Marie, of Roumania, Lady Diana Manners, and Mrs. Reggie Vanderbilt." Possibly we are in for a renaissance of the testimonial epoch; perhaps the giving of testimonials for nostrums is again to become respectable. During the last few years such endorsements as have appeared have been credited, in the main, to bucolic individuals from remote hamlets that could be located by the average person only in a postoffice guide.

True, within recent times there have been a few instances of "patent medicine" testimonials of "class." There was, for example, the inspiring testimony of the late William E. Mason, formerly United States Senator, who vouched for the virtues of Nuxated Iron. Then, when Sanatogen's star was in the ascension, the public press carried testimonials for this esoteric form of cottage cheese from such well known persons as "Marse" Henry Watterson, John Burroughs, Father Bernard Vaughn, and the Hon. William E. Chandler. These, however, were mild compared with the testimonials of twenty years ago. At the time that Peruna was at its palmyest, with a maximum amount of alcohol and a minimum amount of any other drug of importance, the public press was filled with testimonials from noted men and women, commending the medicinal virtues of this thinly disguised cocktail. A few among the notable galleries of celebrities that Peruna ran were Julia Marlowe, Admiral Schley and Rear Admiral Hichborn. Paine's Celery Compound, an alcoholic nostrum that died with prohibition, had almost as distinguished a group of endorsers as did Peruna, one of the best being that given by Sarah Bernhardt. The Divine Sarah was somewhat addicted to the testimonial habit, having appeared in that capacity not only for the Paine product but also for Duffy's Malt Whiskey, Pinelyptus Pastilles and other preparations of equal therapeutic unimportance. One also calls to mind the testimonial of the Hon. Champ Clark, who was impressed with the value of Electric Bitters, and also Madame Schumann-Heink's assurance that Fahrney's Blood Vitalizer was a "great help" and a "good medicine." Possibly the testimonial is coming back. "Things are in the saddle." With royalty and the aristocracy of Europe vying with democracy's famous, who knows but the time may come when we shall read a flowery panegyric on some contemporary pick-me-up in which Herr Wilhelm Hohenzollern will recommend the product as an invaluable remedy for that "all gone" feeling! —*Jour. A. M. A.*, June 13, 1925.

J. H. St. John, Washington, D. C. (*Journal A. M. A.*, April 24, 1926), records his experience with culturing amebas in four cases. In one case, the culture was positive in twenty-four hours, and the ameba recovered was identical with that observed in direct examinations. By subculturing every forty-eight hours, this ameba has been carried in culture for the last four months. In another case, the ameba has been maintained in culture for the last three months; in a third case, for a period of two months. In cultivation, a specimen of stool, 48 hours old, contained a moderate number of cysts of *E. histolytica*. Motile amebas, *E. histolytica*, were recovered in culture at the end of twenty-four hours' incubation. The stool was placed in the icebox, and subcultures were taken after a lapse of eight days, when motile amebas were again recovered. St. John says that the movement and form taken in movements are sufficiently characteristic of the large strains of *E. histolytica* to aid materially in its identification. The rate of movement in culture calculated from that of four active specimens, is 27.9 microns to the minute, or slightly less than 1½ inches a day. So characteristic is the movement of *E. histolytica* that any entozoic ameba obtained from man in culture which is found to move actively across the field of the microscope should at once incite a strong suspicion that the ameba in question is *E. histolytica*. St. John feels that it is probable that the application of the cultural method to surveys of the population will necessitate a revision upward of the incidence of amebas in man.

THE JOURNAL

OF THE

Missouri State Medical Association

SEPTEMBER, 1926

EDITORIALS

EXECUTIVE COMMITTEE MEETING

The Executive Committee of the Association held a meeting at the headquarters in St. Louis, August 18, and received the report of Kessler, Cartall & Company, Certified Public Accountants, who had been employed to audit the financial records of the Association for the years 1924, 1925 and to June 30, 1926. The Committee also established a budget system to cover the expenses of the Association. The report of the auditors and the budget will be published in the October JOURNAL, there not being time to set up these items in proper form for them to appear in this issue.

President Breuer appointed the following committees:

Post Graduate Extension Course:

Dr. Ralph L. Thompson, St. Louis, Chairman

Dr. Francis Reder, St. Louis

Dr. C. B. Francisco, Kansas City

Dr. Sam Snider, Kansas City

Dr. Guy L. Noyes, Columbia

Program Committee:

Dr. E. J. Goodwin, St. Louis, Chairman

Dr. Robert F. Hyland, St. Louis

Dr. Frank I. Ridge, Kansas City

Revision of Constitution and By-Laws:

Dr. M. P. Overholser, Harrisonville, Chairman

Dr. J. E. Thornton, Columbia

Dr. C. J. Hunt, Kansas City

Dr. T. W. Cotton, Van Buren

Dr. E. P. North, St. Louis.

Council on Medical Education:

Dr. Franklin E. Murphy, Kansas City

Dr. McComas, Chairman of the Council, announced that he would be out of the country for about six weeks while attending the Press Congress of the World as official physician for the American Delegation at Geneva, Switzerland, and Dr. W. C. Gayler, St. Louis, was elected Vice Chairman of the Council.

The Committee discussed the plan of preparing the amendments to the Medical Practice Act, submitted by the Committee on Health and Public Instruction, and arranged

for the introduction of the bills in the legislature.

Those present at the meeting: Dr. W. H. Breuer, St. James, President; Dr. A. R. McComas, Surgeon, Chairman; Dr. H. E. Pearse, Kansas City, Chairman of the Committee on Health and Public Instruction; Dr. G. W. Hawkins, Salisbury, Treasurer; Dr. E. J. Goodwin, Secretary; Dr. W. L. Allee, Eldon; Dr. W. C. Gayler, St. Louis; Mr. J. Henry Caruthers, St. Louis.

TESTIMONIAL TO DR. TINSLEY BROWN

In another column* we publish an account of a testimonial meeting held in honor of Dr. Tinsley Brown, Hamilton, on July 29, celebrating his completion of fifty years of practice. The meeting was held on the lawn of Dr. Brown's beautiful residence and was attended by about fifty of his intimate friends in the medical profession and prominent in the social and civil life of Hamilton. Many who were unable to attend the meeting expressed their affection for Dr. Brown and appreciation of the service he has rendered his community during the fifty years that he has been practicing in that town. All of his professional life has been given to the inhabitants of Caldwell County. Dr. Brown was honored by the medical profession when he was elected President of the State Medical Association in 1909. He is now an Honor Member of the county and state associations and an Affiliate Fellow of the American Medical Association. Notwithstanding the years of service that would have broken down a constitution of less vigor and ruggedness, Dr. Brown continues to perform the duties of Secretary of the Caldwell County Medical Society and answers professional calls with the energy and alacrity of a much younger man. He is now in his seventy seventh year.

NAVY DAY, OCTOBER 27, 1926

Navy Day was first sponsored in 1922 by the Navy League of the United States, a volunteer association of individuals who seek to place information concerning the Navy before the public, and since that time the official approval and co-operation of practically all patriotic and veterans' organizations have been offered in support of the observance of the day.

The sponsors of Navy Day have sought to establish at least one day in the year when the people will turn their thoughts in a special way to what their Navy means to them, when special articles will be timely in the press, and when

*See page 349.

tribute can be paid to the past and present services of the Navy to the nation.

October 27 has been celebrated as Navy Day because it is the anniversary of the birth of President Theodore Roosevelt, so much of whose life was devoted to establishing a sound naval policy for the United States of America. It will be remembered that President Roosevelt first achieved a national reputation by writing a naval history of the War of 1812, a work of such merit that it was incorporated into Clowe's Royal Navy, a monumental history of the British Sea Service. Later, as Assistant Secretary of the Navy, and finally, as President, Roosevelt bent his tremendous energies to impress upon the American people the necessity for an adequate Navy, and through his leadership to realize this ideal.

October is also the month in which the American Navy was founded in 1775 by the Continental Congress.

In connection with Navy Day, it is but fitting that we should call the attention of our readers to a very important, but little considered, work that has been and is being accomplished by the Medical Department of the Navy. We refer to the physical care of our dependents in our island possessions, Guam, Samoa, and the Virgin Islands.

These islands came into our possession in various ways: Guam, as a result of the Spanish-American War; Samoa, by treaty arrangement with the European Powers; and the Virgin Islands, by purchase. Since their acquisition all have been presided over by Naval Governors and all medical work in them has been done by Naval Medical Officers.

As in many tropical countries, the diseases most commonly met with among the natives of these islands are leprosy, yaws, skin diseases of various types, dengue, malaria and filariasis. Added to these in the Virgin Islands are pellagra and the venereal diseases.

Efforts looking towards the eradication of these diseases have met with great success and now, instead of being places of danger both to the natives and to white visitors, these islands compare favorably in morbidity and death rates with our own more highly civilized communities.

Guam, at the time it was taken by the United States, was suffering from a severe epidemic of typhoid fever. Immediate improvement of the water supply, under the direction of Naval Medical Officers, resulted in a prompt termination of the epidemic and typhoid fever has been practically unknown there since. Gangosa, terribly mutilating in its effect and the scourge

of Guam, has been practically eradicated as the result of the extensive use of salvarsan and neosalvarsan by Naval Medical Officers.

In Samoa, filariasis had from time immemorial been rampant and its results were evident everywhere in the islands at the time the United States acquired them. An American naval surgeon in 1906 decided that surgical removal of scrota enlarged as a result of this disease would be the proper procedure. In one year he removed masses of scrota from 149 patients, with success in all cases but one, who died. The masses weighed from 10 to 85 pounds and the relief experienced by their owners was beyond expression.

The Virgin Islands, our most recent acquisition, had for years belonged to Denmark and had received the benefits which accrue from contact with such highly cultured people as the Danes. Even here, however, much remained to be done after the purchase of the islands by the United States. Because of lack of funds, the Danes had been unable to carry on extensive sanitation. The Americans immediately set to work to improve health conditions in the islands, and the results have well repaid the government for the money expended and the Naval Medical Officers for the time and energy they have spent in the work.

Typhoid fever was constantly present in the Virgin Islands. Attention to sewage disposal and the milk supply, together with vaccination of the entire population between 5 and 45 years of age, resulted in its disappearance from the islands and no case has been reported since 1918.

Amidst an abundance of vitamin containing foods, the people of the Virgin Islands suffered greatly from pellagra. Hospitalization of the victims, with instruction in proper feeding, soon put an end to this.

Lack of care of the expectant mother and high infant mortality have presented two of the greatest problems for solution in the island possessions of the United States. They have been solved by the members of the Navy Nurse Corps, who, under the direction of Naval Medical Officers, have established training schools for native nurses, and conducted clinics all over the islands where the natives have been instructed in how to live so as to get the most out of life in their tropical paradise.

Our native wards have been given the best medical service our government could send to them; they have profited by it; and our Naval Medical Officers have reason to be proud of the improved conditions which have been brought about through their efforts.

THE WORKMEN'S COMPENSATION ACT

At the general election to be held in November the Workmen's Compensation Act passed by the 53d General Assembly in 1925 will appear on the ballot as a referendum submitted by persons and interests opposed to the Act. The operation of the law has been suspended by this referendum. The Act is supported by all business interests and the State Federation of Labor. Practically the only persons who are opposed to the law are the ambulance chasing lawyers. Missouri is one of only six states without the benefits of a workmen's compensation law.

From the standpoint of the medical profession the law as passed by the legislature in 1925 is acceptable. In regard to the fees and charges for services, the law provides that they "shall be limited to such as are fair and reasonable for similar treatment of injured persons of a like standard of living," but the Commission in charge of administering the law is empowered to reduce or increase medical fees according to the exigencies of the case. We are informed that the insurance companies have acknowledged that the law does not place an arbitrary limit of a minimum sum for medical or surgical services.

Every physician knows how unsatisfactory is our present system of recovering damage for injuries sustained by employees, and how uncertain is the collection of fees for service rendered. A great deal of time is lost when it is necessary for the physician to testify in damage suit cases.

Every member should support the Workmen's Compensation Law and vote against the proposition as it will appear on the ballot. The act will be printed on the ballot in November as Proposition No. 1. In order to support the law, it will be necessary to scratch "No" and vote "Yes."

PROPOSED AMENDMENTS TO THE MEDICAL PRACTICE ACT

Our Committee on Health and Public Instruction has devoted a great deal of time during the past six months to the consideration of amendments to the Medical Practice Act for introduction in the next legislature, and has been materially assisted in this work by Dr. Joseph W. Love, Springfield, a former member of the Committee. Dr. Love studied the laws of the various states and drew up a set of amendments which were approved by the Greene County Medical Society last May. The Committee on Health and Public Instruction

met in Kansas City on June 12 and approved certain portions of the amendments submitted by Dr. Love. The Committee then requested the Executive Committee to call a meeting of the Councilors and officers of the state and county societies to meet at Jefferson City on August 10 for a more thorough consideration of the proposed amendments. At the meeting at Jefferson City, the amendments were again considered and certain propositions adopted for submission to the county societies and general membership. The proposed amendments, as finally approved by the officers and Committee, will be forwarded to each county medical society for their consideration and are published below for the information and action of all members of the Association. The Committee on Health and Public Instruction desires that each member read these amendments and express his opinion of the advisability of preparing them for introduction in the legislature. The Committee hopes that the members will take an active interest in this proposition and co-operate in the passage of the bills when they are finally prepared for introduction. Unless there is a very decided sentiment against some of the proposals, the amendments will be submitted to the legislature in the form presented herewith.

It will be noted that our opposition toward those who attempt to heal the sick by spiritual means or prayer has been abandoned and that we have incorporated a clause exempting such persons from the operation of the Medical Practice Act. The Committee on Health and Public Instruction was unanimous in adopting this provision and the same unanimity prevailed at the meeting of the councilors and officers at Jefferson City when this question was put to vote.

Another important amendment is the provision empowering the State Board of Health to initiate prosecutions against persons who are violating the act and requiring prosecuting attorneys to institute proceedings when the State Board of Health lays a complaint before them. Reciprocity with other states is provided for, within the discretion of the Board of Health, thus restoring the important provision rescinded by the legislature in 1907. The certificate of the National Board of Medical Examiners is recognized and the board of health given discretionary power to accept this certificate in lieu of its own professional examination in the issuance of licenses.

A very important amendment is one requiring applicants for a license to show evidence that they have attended four full terms of nine months each and also to furnish evidence that they have received their diplomas from some

reputable medical college that enforces the four terms of attendance. This clause corrects the serious defect in our present law which merely requires the applicant to show that he possesses a diploma issued by some reputable medical college.

The proposed amendments follow:

PROPOSED AMENDMENTS TO THE MEDICAL PRACTICE ACT

Submitted by the Committee on Health and Public Instruction

Approved at the Councilors' Meeting

MISSOURI STATE MEDICAL ASSOCIATION

Jefferson City, August 10, 1926

(The parts in bold face type are to be added to the section. The parts in brackets are to be omitted from the section.)

SEC. 7332. All persons desiring to practice medicine or surgery in this state, or to treat the sick or afflicted, as provided in section 7330 of this article, shall appear before a state board of health, at such time and place as the board may direct, and there shall be examined as to their fitness to engage in such practice. All persons appearing for examination shall make application in writing to the secretary of the said board thirty days before the meeting. They shall furnish satisfactory evidence of their preliminary qualifications, to wit, a certificate of graduation from an accredited high school, or its equivalent, or state normal school, college, university or academy. They shall also furnish satisfactory evidence of having **attended throughout at least four terms of nine months each and of having received a diploma from some reputable medical college [of four years' requirements] that enforces four terms of nine months each requirements, including two years' experience in operative and hospital work at time of graduation; provided that the time of graduation has been since March 12, 1901, and two years' requirements if the date of graduation is prior to March 12, 1901, and shall also furnish evidence of good moral character. The medical examination may be made in whole or in part in writing and shall be of elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner, and shall embrace the subjects of anatomy, chemistry, physiology, therapeutics, obstetrics, gynecology, surgery, practice of medicine, bacteriology,**

medical jurisprudence and hygiene, and such other branches as the state board may direct: Provided, that each applicant for license shall have two hours if necessary during which to answer the usual number of questions asked on each branch examined upon. The candidate shall be required to attain an average of **seventy-five per centum of all subjects examined on, provided that he must not fall below fifty per centum on any one subject,** before being granted a license: Provided, however, that the examination of any applicant in therapeutics shall be conducted by the member or members of the said board who represent the system of medicine of which said applicant has been a student. If there shall be no representative of the school or system of which the applicant has been a student, the examination in therapeutics shall be conducted by an examiner appointed for that purpose by the governor of Missouri, but all examinations other than that in therapeutics shall be conducted as heretofore provided in this article. The board of health shall issue to such persons as they shall find upon examination to possess the requisite qualifications, a license to practice medicine and surgery in accordance with the provisions of this article, and the state board of health shall not be permitted to favor any particular school or system of medicine but all applicants shall be subjected to the same examination and the same degree of proficiency shall be required of all: **Provided, that in determining the qualifications necessary for registration as a qualified physician the state board of health may, at its discretion, accept the certificate of the National Board of Medical Examiners of the United States chartered under the laws of the District of Columbia, in lieu of and as equivalent to its own professional examination. Every applicant for a license upon the basis of such certificate shall, upon making application showing necessary qualifications, as above set out, be required to pay the same fee required of applicants to take the examination before the board. And it is further provided that the said board of health may under the regulations established by the board admit without examination legally qualified practitioners of medicine who hold certificates to practice medicine in any state or territory of the United States or District of Columbia with equal educational requirements to the state of Mis-**

100 souri and that extend like privileges to
101 legally qualified practitioners from this
102 state, upon the applicant paying a fee of
103 fifty dollars (\$50.00).

SEC. 7334. Any person practicing medicine or surgery in this state, and any person attempting to treat the sick or others afflicted with bodily or mental infirmities, and any person representing or advertising himself by any means or through any medium whatsoever, or in any manner whatsoever, so as to indicate that he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily or mental infirmities, without a license from the state board of health, as provided in this article, or after the revocation of such license by the state board of health, as provided in this article, shall be deemed guilty of a misdemeanor, and punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days nor more than one year, or by both such fine and imprisonment for each and every offense; and treating each patient shall be regarded as a separate offense. Upon receiving information that any provision of this section has been or is being violated the secretary of the state board of health shall investigate the matter and upon probable cause appearing, shall, under the direction of the board, file a complaint with the prosecuting or circuit attorney in the county or city where the alleged offense occurred. It shall be the duty of the prosecuting or circuit attorney upon request of the secretary to take charge of and conduct such prosecution. Any person filing or attempting to file as his own, a license of another or a forged affidavit of identification, shall be guilty of a felony and upon conviction thereof, shall be subjected to such fine and imprisonment as are made and provided by the statutes of this state for the crime of forgery in the second degree. Said fines to be turned into the state treasury when collected: Provided, that physicians registered on or prior to March 1, 1901, shall be regarded for every purpose herein as licentiates and registered physicians under the provisions of this article. *[And provided further, that any person who having attended any medical college, and has received at least*

three courses of lectures from any medical college or colleges, and has had at least one course as practitioner in any general or special hospital, who is now and has been for a period of at least twenty years a resident of the state of Missouri, and who has during all of such time been actively engaged in the practice of medicine in the locality where he resides, shall be regarded as a licensed and registered physician under the provisions of this act. And provided further, that all persons who have heretofore matriculated and received their diplomas from accredited schools and medical colleges of Missouri, shall be governed and licensed by and under the law in force at the time of such graduation.]

SEC. 7338. It is not intended by this article to prohibit gratuitous service to and treatment of the afflicted, and this article shall not apply to commissioned surgeons of the United States Army, United States Navy and United States Public Health Service while in the performance of their official duties, nor to any licensed practitioner of medicine and surgery in a border state attending the sick in this state provided he does not maintain an office or appointed place to meet patients or receive calls within the limits of this state, and provided that such practitioner comply with the Missouri statutes and with the rules and regulations of the Missouri State Board of Health relating to the reports of births, deaths and contagious diseases; and this article shall not apply to persons who endeavor to cure or prevent disease or suffering by spiritual means or prayer provided that quarantine regulations relating to contagious diseases are not infringed upon. Provided further, that no provision of this section shall be construed or held to interfere in any way with the enforcement of the rules and regulations adopted and approved by the state board of health or any municipality under the laws of this state for the control of infectious or contagious diseases.

SEC. 4. It is hereby declared that this Act is necessary for the immediate preservation of the public welfare, health and safety, and in the opinion of the General Assembly an emergency exists and, therefore, this Act shall take

7 effect and be in full force from and
8 after its passage.

H. E. PEARSE, Kansas City, *Chairman*
W. T. ELAM, St. Joseph
E. E. BRUNNER, Marshall
R. S. VITT, St. Louis
L. C. CHENOWETH, Joplin

Committee on Health and Public Instruction.

NEWS NOTES

Dr. W. C. Gayler, St. Louis, was elected vice chairman of the Council at the meeting of the Executive Committee, August 18.

Dr. A. R. McComas, Surgeon, Chairman of the Council, sailed on the Steamer Carmania, September 4, for Geneva, Switzerland. Dr. McComas was appointed surgeon for the American delegation to the Press Congress of the World which convenes at Geneva September 14-18.

The Clinical Congress of Physical Therapy will meet in conjunction with the Fifth Annual Meeting of the American College of Physical Therapy at the Drake Hotel, Chicago, October 18-23. During the meeting six prizes will be awarded totaling \$2500 for the best thesis on some branch of physical therapeutics, embracing galvanism, diathermy, radiant heat light, ultraviolet light, X-ray radium, and hydrotherapy.

The Arcadia Valley Hospital at Ironton, Missouri, situated in the heart of the beautiful Arcadia Valley, is ideally located to receive convalescents from a distance. The hospital serves a large community in the care and treatment of the sick, but it is so beautifully adapted to care for a few convalescents that Dr. R. W. Gay, of Ironton, who is in charge of the hospital, says he would be willing to receive some convalescents. The hospital is equipped with comfortable beds, hot and cold water, electric fans and all other appurtenances for the convenience and comfort of patients. The food is of the highest quality, fresh and pure. For further information, members should write Dr. R. W. Gay, at Ironton, Mo.

Koch Hospital, St. Louis, the municipal institution for the treatment of tuberculous patients, will no longer receive for treatment ex-service men receiving compensation from the

United States Veterans' Bureau, according to a ruling issued by Hospital Commissioner Shankland. Commissioner Shankland is of the opinion that the United States Government should provide for the care of tuberculous ex-service men in government hospitals where, he believes, there are sufficient beds in thoroughly equipped institutions to receive all such veterans. Koch Hospital is maintained entirely by the City of St. Louis as a free institution for the treatment of the tuberculous and cannot accept pay from anyone notwithstanding the willingness of veterans to pay for their care. The institution is overcrowded now, according to Commissioner Shankland.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on October 4, 1926: At Washington, D. C.; Chicago, Ill.; New Orleans, La.; San Francisco, Cal.

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination. Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate. Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

It is reported that the Board of Managers of the State Eleemosynary Institutions is advocating a bond issue of \$7,380,000 to be utilized in extending the facilities for the care and treatment of inmates of the state hospitals and other eleemosynary institutions. According to the plan proposed by the board, \$2,000,000 will be asked for the construction of a new State Hospital designed to serve the northeast section of the state. Other expenditures recommended are: \$1,000,000 for State Hospital No. 1 at Fulton; \$1,285,000 for State Hospital No. 2 at St. Joseph; \$790,000 for State Hospital No. 3 at Nevada; \$735,000 for State Hospital No. 4 at Farmington; \$830,000 for the Mo. State School (for the feeble-minded and epileptic) at Marshall and \$760,000 for the State Sanatorium at Mount Vernon. According to the board's calculations the expenditure of these sums would anticipate the demands and requirements of all eleemosynary institutions for a quarter of a century.

The Jackson County court has asked the

State Eleemosynary Board to erect a new state hospital for the insane either in Kansas City or in Jackson County if the bond issues proposed by the board are adopted. The board also proposes to increase the fees of private patients at the state hospitals from \$20 per month to \$42 per month. The Jackson County court is opposed to this increase.

The *Bulletin* of the Chicago Medical Society directs attention to a man who poses as George A. Fox, George Wm. Fox, and Wm. Fox, who calls upon physicians and tries to persuade them to cash checks ranging from twenty five to fifty dollars. Description: Age, 42 to 43 years old; Height, 5 ft. 10 in. Weight, about 140. Slightly round shouldered—said to be thin—smooth face—probably blue eyes—sandy gray hair—conspicuous scar on left chin under the jaw bone. Very fluent talker, apparently well versed in medical terms—poses as a doctor, in a number of instances stated he was from Milwaukee. Is said to have studied medicine for three years at Rush Medical College, Chicago.

Method of operation: This man calls on a doctor, introduces himself, and either claims to be acquainted with the doctor or intimately acquainted with some of his doctor friends or classmates of a certain medical college. Fox then carries on lengthy conversation about general events in the profession, and finally states that he has been driving through the East with his wife and daughter and is now short of money, and has not sufficient to continue his travel home to Milwaukee with his family. In this way he persuades the doctor or other person called upon to cash a check ranging from \$25.00 to \$50.00. Reports received are to the effect that he has already passed over 50 checks in this manner in Chicago and other parts of the country.

All physicians should be on the lookout for this impostor, and if he shows up detain him under a suitable pretext and notify the police.

The 39th Annual Meeting of the Medical Society of the Missouri Valley will be held jointly at Omaha and Council Bluffs, September 15-17. The program planned for the meeting will consist of papers and lectures on various scientific and clinical subjects and clinics. Fully half of the time will be devoted to clinics given by men of national reputation. Among them will be:

Dr. Hilding Berglund, Professor of Internal Medicine, University of Minnesota, Minneapolis, Minn.

Dr. Irving S. Cutter, Dean of Northwestern University College of Medicine, Chicago, Ill.

Dr. McKim Marriott, Dean and Professor of

Pediatrics, Washington University, St. Louis, Mo.

Dr. E. C. Rosenow, University of Minnesota, Mayo Foundation, Rochester, Minn.



Medical Arts Building, Omaha, Nebraska, to be dedicated at the meeting of the Medical Society of the Missouri Valley, September 15-17.

Dr. Gabriel Tucker, Bronchoscopic Clinic, University Hospital, Philadelphia, Pa.

Dr. William Allen Pusey, Chicago, Ill.

Dr. C. R. Moore, University of Chicago, Chicago, Ill.

Dr. Jabez N. Jackson, President-Elect American Medical Association, Kansas City, Mo.

UNIVERSITY OF KANSAS

"Differential Diagnosis Between Coronary Artery Disease and Acute Abdominal Conditions," H. P. Boughnou, M.D., Instructor of Medicine.

"Exophthalmic Goiter in Children," L. P. Engel, M.D., Assistant Professor of Surgery.

"Experimental Mouse Cancer," F. C. Helwig, M.D., Assistant Professor of Pathology.

"Title to be Announced," R. L. Haden, M.D., Professor of Experimental Medicine.

UNIVERSITY OF IOWA

"Conservative Treatment of Eclampsia,"
E. D. Plass, M.D.

"Arthritis of the Knee Joint," Arthur
Steindler, M.D.

"Blood Chemistry of Arthritis Deformans,"
J. D. Boyd, M.D.

"The Influence of Diet in the Treatment of
Cardiac Failure," F. A. Smith, M.D.

SPECIAL TOPICS

"Diseases of the Gall Bladder," Harry Dahl,
M.D., Des Moines, Iowa.

"Fractures," John Martin, M.D., Des
Moines, Iowa.

"Some Diseases of the New Born," Fred
Moore, M.D., Des Moines, Iowa.

"The Surgical Phase of Goiter," Charles
Ryan, M.D., Des Moines, Iowa.

Dr. E. H. Skinner, Kansas City, Mo., will
give a demonstration of Gall Bladder Visualiza-
tion.

BRONCHOSCOPIC CLINIC

Among the many interesting features of the
meeting will be a lantern slide and moving
picture demonstration of work at the Chevalier
Jackson Clinics, Philadelphia, by Dr. Gabriel
Tucker.

Dr. Earl Sage, Omaha, Nebraska, and Dr.
M. E. O'Keefe, Council Bluffs, Iowa, are in
charge of the Committee on Arrangements.
The secretary is Dr. Chas. Wood Fassett, 115
E. 31st St., Kansas City, Mo.

OBITUARY

HAROLD JERARD, M.D.
RODNEY D. RAMEY, M.D.

RESOLUTIONS ADOPTED BY THE CASS COUNTY
MEDICAL SOCIETY

Death has taken from us since our last meet-
ing two of the loyal and faithful members of our
county medical organization.

In words simple and sincere we desire to pay
tribute to the virtues of these departed ones
and to render to their memory the homage and
affection of true friendship and fellowship.

Dr. H. Jerard, of Pleasant Hill, died March
14, 1926. He was one of the charter members
of our county organization and has ever since
proved faithful and loyal to organized scientific
medicine. As a physician he was loved and re-
spected by the medical profession of our county
largely because of his ability, sincerity and
ethical dealings with his fellow practitioners.
He served our county organization as presi-

dent and in various other official capacities and
for many years took an active part in its scien-
tific work. Therefore, be it

Resolved, That in the death of Dr. H. Jerard
our County Medical Society has lost one of its
most loyal, faithful, competent, and conscien-
tious members, and at this our first meeting
since his death we now desire to honor him for
his numerous good deeds and for the valuable
service he rendered our county medical organi-
zation during the many years of his member-
ship.

Resolved, That these resolutions be spread
upon the minutes of this meeting and a copy
sent to the family.

Dr. R. D. Ramey, of Garden City, a charter
member of the Cass County Medical Society,
died suddenly on April 6, 1926.

In paying tribute to this faithful member of
our county organization we must all acknowl-
edge that no other member sacrificed so much
of his time and manifested any greater interest
in the welfare of organized medicine than did
Dr. Ramey. He was for many years the most
faithful attendant at our meetings, and served
as our president for three years in succession
and at all times had the best interest of our or-
ganization at heart. He made a long and hon-
orable record in our county in the medical pro-
fession. His noble heart and useful hands,
with words of encouragement, have been a
blessing, benediction, and inspiration to many
with whom he has come in contact. His in-
fluence was an important factor in keeping
alive the work and interest in our county medi-
cal organization.

Resolved, That in the death of Dr. R. D.
Ramey we have lost a member who was deeply
concerned in the success and continued pros-
perity of our county medical organization, one
who has proven by his faithful attendance at
our meetings, by his willing service and his
many sacrifices, that he had at heart the best
interests and welfare of organized scientific
medicine of our county.

Resolved, That these resolutions be spread
upon our minutes and a copy sent to the family.

COMMITTEE ON RESOLUTIONS,
CASS COUNTY MEDICAL SOCIETY.

CORRESPONDENCE

TIMES CHANGE

Carrollton, Aug. 27, 1926.

To The Editor:

It has occurred to me that a little past history of
Carroll County might be acceptable and of interest
to some of the readers.

Truly times are changing and the old Latin quotation, *Tempus mutantur et in illis mutamur* (Times are changing and we are changing with them), was never so true. Of the class of '87 I began my career under the old regime of sometimes the old saddlebags but most generally a team and buggy, and the idealism of the family physician.

When I returned to the old home town to take up the new role of an M.D. it was with the resolution to succeed or die. How well this has been accomplished others may decide, but I have very vividly before my mind the picture of Dr. Heidle who was our oldest and one of our earliest pioneer physicians, just then retiring with his saddlebags from a successful career because of the infirmities of old age.

The fraternal spirit and recognition of the code of ethics were everything in those days. Actively engaged were such splendid rugged Christian men as Dr. Littleton Tull, Dr. Wm. A. Tull, Dr. Peter Austin, Dr. Peter Edward Austin, Dr. A. L. McCorkle and Dr. J. C. Cooper. A little later came Dr. E. A. Waggener, Dr. M. W. Craton, Dr. George R. Highsmith, and yet a few years later Dr. Robert Emmet Austin, Dr. H. W. Tull, Dr. R. F. Cook, and still later Dr. Wm. G. Atwood and Dr. H. B. Scovern, making a galaxy of medical men unsurpassed in any county or clime.

As a matter of county history it might be mentioned that at one time in the early nineties there were in active practice in Carroll County four Doctors Austin and three Doctors Tull co-operating harmoniously together.

With the introduction of the telephone, the hospital and the automobile the change would appear complete.

Are they more successful or better than in ye olden days? I leave it an open question.

C. S. AUSTIN.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

- Camden County Medical Society, November 23, 1925.
- Howard County Medical Society, January 8, 1926.
- Chariton County Medical Society, January 20, 1926.
- Ralls County Medical Society, February 27, 1926.
- Schuyler County Medical Society, March 25, 1926.
- Franklin County Medical Society, March 29, 1926.
- Howell-Oregon Medical Society, April 7, 1926.
- Monroe County Medical Society, April 14, 1926.
- Platte County Medical Society, April 23, 1926.
- Atchison County Medical Society, April 26, 1926.
- Saline County Medical Society, May 15, 1926.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met at Hamilton July 29 at 2 p. m. in the Public Library

Building with the President, Dr. G. S. Dowell, in the chair. The following were present: Dr. G. S. Dowell, President, Dr. Tinsley Brown, Secretary, and Drs. B. F. Carr, H. H. Patterson, E. A. Thompson, J. E. Gartside, W. S. Shouse, L. M. Daley, C. H. Wilbur and L. J. Eads. Visitors, Dr. E. J. Goodwin, St. Louis, Secretary of the State Medical Association, Drs. Joel Denman, Austin Carr, J. F. Mackey and George Moreland, of Kansas City, Dr. H. M. Grace, Chillicothe, and a second year medical student, Donald Dowell, Braymer, the son of our President.

The minutes of the meeting held at Braymer June 10 were read and approved. The application of Dr. Orley Clyde Kilbourn, Cowgill, which had been referred to the censors at the last meeting, was reported favorably and upon ballot he was declared elected and his name was ordered placed upon the roll of the society.

Dr. C. Lee Woolsey, who had been a previous member, but had lapsed on account of being in the World War from which he had only recently returned, was restored to membership.

By vote the visitors were accorded the privilege of the society. Dr. Goodwin was then introduced to the society and received a hearty welcome. He made an extended address dealing with the working of the county societies as the foundation of all the medical societies and associations. The Society received much information regarding the need for legislation and other important matters from his address. The Society voted its hearty thanks to Dr. Goodwin for his presence and for the talk he made.

Dr. Mackey gave us a talk on "Prostatic Diseases" which was discussed by those present and much information was elicited.

Our President, Dr. Dowell, gave us an interesting talk on "Gastroduodenal Ulcers." This brought out quite an interesting discussion, particularly in regard to the complication of the symptoms of gastro-duodenal ulcers with those of appendicitis. Several incidents were mentioned in which the gastric symptoms had cleared up when the appendix was removed.

A vote of thanks was given to all visitors for their presence and participation in the program.

The next place of meeting will be at Kingston in August at the usual time.

The Society adjourned to meet later in the evening at Dr. Brown's residence for a social event.

TINSLEY BROWN, M.D., Secretary.

Celebrating 50 Years in Practice

After the adjournment of the meeting of the Society the members and visiting doctors repaired to the residence of Dr. and Mrs. Tinsley Brown where they found the wives and families of the doctors assembled. The interior of the beautiful residence was decorated with flowers of yellow and white. A delightful buffet luncheon was served from the dining room, where the table was fully extended and laden with fried chicken, country ham, salads and other picnic specialties. All partook heartily of these delicious and well prepared edibles, after which the table was cleared and the large yellow tapers were lighted. A large cake with 50 yellow candles was then placed in the center of the table surrounded by other delicious cakes. Mrs. J. A. Waterman, the widow of the late Dr. Waterman, and Mrs. J. E. Gartside, wife of Dr. J. E. Gartside, assisted by Misses Helen and Mildred Thompson, served the cake with yellow brick ice cream.

After this the company repaired to the spacious and beautiful lawn of this elegant residence where Dr. Geo. S. Dowell acted as toastmaster. He explained that this meeting was in honor of the fiftieth

anniversary of Dr. Tinsley Brown's graduation in medicine. He said that Dr. Brown had always been a supporter of good, clean, medical ethics and had always been a leader in the medical societies. He joined the Grand River Medical Society in July, 1875, the year before he graduated from the Missouri Medical College. The society was organized at Chillicothe and 23 signed the constitution and by-laws. Dr. Brown is the only one of these signers now living. He is also the only one living of those who organized the Caldwell County Medical Society in the late seventies. He has been a member of the Missouri State Medical Association for 46 years and a member of the American Medical Association since 1885 when he and the late Dr. Calvin C. Leeper attended the meeting of the Association at New Orleans that year. Dr. Brown has been president of his county society and has served as

tion with Dr. Brown in the work of the State Society and commended him for his faithful work as president and his loyalty as secretary of his county society.

Dr. J. F. Mackey, Kansas City, and Dr. H. M. Grace, Chillicothe, also spoke.

Dr. Brown is still in active practice and enjoys his home with his family which consists of his wife, Mary R., and his daughter, Miss Merle. His sons, Tinsley, Jr. and Austin, are both married, the two having four children. Tinsley has two sons and one daughter and Austin one daughter.

Those present besides Dr. Brown, wife and daughter, were Dr. J. E. Gartside and wife, Kingston; Dr. Wm. S. Shouse and wife, Kingston; Dr. B. F. Carr and wife, Polo; Dr. C. H. Wilbur, Polo; Dr. G. S. Dowell and wife, Braymer; Dr. H. H. Patterson, Braymer; Dr. C. L. Woolsey, Braymer;



On the lawn of Dr. Tinsley Brown's home. Dr. Brown is the fourth from the left in the second row.

its secretary for more than 20 years. He was elected President of the Missouri State Medical Association in 1909. He is one of the old time doctors, but was always in advance of his time, and is now the oldest practicing physician in the county, both in age and length of practice. He has not only been active in his profession, but has found time to be active in church work and civic affairs, as he has been an Elder in the Presbyterian Church for 43 years and was postmaster of Hamilton under the Wilson administration for over eight years.

Dr. B. F. Carr then spoke in behalf of the Society, telling of his early association with Dr. Brown and of his continuous practice at Hamilton for fifty years. He commended him on his strict fidelity to his profession. He then presented Dr. Brown with a belt and a beautiful gold buckle marked "From the Caldwell County Medical Society to Dr. Tinsley Brown, 1876-1926."

Dr. E. J. Goodwin, Secretary of the State Medical Association, then spoke telling of his long associa-

tion with Dr. Brown in the work of the State Society and commended him for his faithful work as president and his loyalty as secretary of his county society. Dr. E. A. Thompson and daughters, Helen and Mildred, Breckenridge; Lina Blair, G. N., Breckenridge; Miss Mary R. Thompson, Breckenridge; Dr. and Mrs. E. J. Eads and daughter, Bernice, Hamilton; Dr. L. M. Daley and wife, Hamilton; Dr. L. D. Brown and wife, Hamilton; Miss Emma Brown, Hamilton; Mrs. G. W. Richardson, Hamilton; Mr. and Mrs. E. E. Clark, Hamilton; Miss Cora Austin, Hamilton; Dr. E. J. Goodwin, St. Louis; Dr. H. M. Grace and wife, Chillicothe; Dr. J. F. Mackey, Kansas City; Dr. George Moreland, Kansas City; Dr. W. Austin Carr, Kansas City; Dr. Joel Denman, Kansas City; Mrs. J. A. Waterman, Hamilton; Miss Myres, Braymer; Donald Dowell, a student at Washington University Medical School, son of Dr. G. S. Dowell, Braymer; Tinsley Brown, Jr., and wife, Kingston; Menzie A., James E., and Mary Francis Gartside, children of Dr. and Mrs. J. E. Gartside, Kingston.

After the speeches, Dr. Brown responded by thanking all present for their kind remembrance,

expressing the hope that all might meet in an annual reunion for others who attain the half century mark in the medical profession.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society and the Women's Auxiliary held their regular meeting in the Old Tavern at Arrow Rock at 6:30 p. m., August 11. They had as guests the members of the Cooper and Lafayette County Medical Societies and Auxiliaries.

Dr. Frank R. Teachenor, Kansas City, gave an interesting and illustrated talk on "Surgery of Hydrocephalus." Dr. Jabez N. Jackson, Kansas City, gave an interesting and instructive talk on "Abdominal Surgery" with special reference to the operative risk for the patient. A Tricounty Medical Society was organized.

FRED A. STAHL, M.D., Secretary-Treasurer.

WOMEN'S AUXILIARY

OFFICERS 1925-1926

President, Mrs. A. B. McGlothlan, St. Joseph.
President-Elect, Mrs. W. M. Bickford, Marshall.
Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

1st Vice President, Mrs. A. W. McAlester, Kansas City.

2nd Vice President, Mrs. Archer O'Reilly, St. Louis.

3rd Vice President, Mrs. M. P. Neal, Columbia.

4th Vice President, Mrs. Wm. Spaulding, Poplar Bluff.

Corresponding Secretary, Mrs. H. S. Conrad, St. Joseph.

Recording Secretary, Mrs. M. A. Hanna, Kansas City.

Treasurer, Mrs. C. T. Ryland, Lexington.

Directors: Mrs. Guy L. Noyes, Columbia; Mrs. Leland Boogher, St. Louis; Mrs. Geo. H. Hoxie, Kansas City; Mrs. Frank Hinchey, St. Louis; Mrs. Walter Baumgarten, St. Louis; Mrs. M. P. Overholser, Harrisonville; Mrs. H. F. Parker, Warrensburg; Mrs. R. W. Berrey, Mexico; Mrs. J. G. Montgomery, Kansas City; Mrs. W. F. O'Malley, Webster Groves.

MESSAGE FROM THE PRESIDENT

To Presidents of County Auxiliaries:

You have perhaps already received your August Journal of the State Medical Association which contains a full report of the Annual Meeting of the Women's Auxiliary to the Missouri State Medical Association, held in St. Louis last May. This report outlines, in general, suggestions for the coming year's work of county auxiliaries and should be kept for reference by the county presidents.

Following the Annual Meeting, the newly elected Executive Board met and adopted the following plans for the year 1926-27 in accordance with resolutions passed by the delegates to the Annual Meeting:

1. To work toward improving rural health conditions.

2. To co-operate with the State Board of Health ascertaining its plans for the state and for each individual county, and following these plans after they have first been approved by the respective medical societies.

3. To continue study programs in the auxiliaries themselves.

4. To push the extension of Hygeia trying to double the number of subscriptions for Missouri.

To execute the first two of these plans it is essential that county auxiliaries first become familiar with health conditions in their respective rural counties. This can perhaps best be accomplished through study of the records of your health board or records for your county procured by you from the State Board of Health; also by conference with your deputy county health commissioner, your county nurse (if you have one), your county physician and your county superintendent of schools who is probably very familiar with health conditions in your county. It is suggested that you write to Dr. James Stewart, State Health Commissioner, Jefferson City, to find out what the State Board of Health knows about health conditions in your county and what plans they have for improving rural health conditions there, and that you lend your hearty co-operation in carrying out the plans of the State Board of Health in your county, after having first secured the indorsement of these plans by your local medical society.

It has been repeatedly suggested, and we still believe, that if the women of the auxiliaries are to be leaders, or even co-operators, in health work, they should first make a study of existing health conditions and modern methods of promoting health and combating disease. The lay women look to doctors' wives for information and leadership, and frequently our lack of information is a source of embarrassment. Therefore we again suggest that wherever practicable, auxiliaries continue with study programs at their meetings.

Mrs. W. M. Bickford, Marshall, President-Elect of the Women's Auxiliary to the Missouri State Medical Association, is also Chairman of Education for this year. You will soon be hearing from Mrs. Bickford who will give you more specific suggestions for your health work and your study programs.

In line with the fourth plan, "To push the extension of Hygeia trying to double the number of subscriptions for Missouri," Mrs. David S. Long, Harrisonville, has been continued as Chairman for the Extension of Hygeia. You have already received a letter from your president explaining plans for placing Hygeia in the hands of as many rural teachers as possible. I want to emphasize the importance of getting this excellent health magazine read by teachers and mothers. As I said in my former letter, I know of no better method of combating ignorance in health matters as well as neutralizing the effects of the great volume of non-scientific and pseudoscientific propaganda circulated amongst the laity, than by getting them to read the authentic, ethical information published in Hygeia, the health organ of our great medical profession.

You will hear from Mrs. Long concerning other plans to increase subscriptions. The State Auxiliary is depending upon you to co-operate whole-heartedly in these plans. Perhaps you can think of even other plans. In that case Mrs. Long will welcome suggestions from you.

As to legislation, the policy of the State Auxiliary is to assist in legislation requested or approved by the State Medical Society. You have already received a questionnaire from Mrs. Geo. E. Bellows which the Health Committee of the State Medical Association asked the Auxiliary to present to candidates for the Senate and House. Mrs. Bellows has resigned because of illness in her family and Mrs. M. P. Overholser, Harrisonville, our efficient former president, will now take up the legislation work which the State Board of Health or State Medical Society may ask us to assist with.

Any local legislation that auxiliaries may be asked to co-operate in should of course first be approved by your local medical society. We should at no time forget that we are only *auxiliaries* to our medical societies.

At our Annual Meeting in St. Louis the Auxiliary voted to co-operate as far as possible with the State Department of Physical Education. Dr. Henry Curtis, of Columbia, is head of this department, and has made some suggestions for our co-operation which Mrs. Bickford and Mrs. Overholser will pass on to you. Since this work is along the line of our own, you will most likely find it practicable to follow some of these suggestions for work in your county.

The Executive Board also expressed the desire to have the auxiliaries co-operate with the Federation of Women's Clubs in the health program outlined by its chairman of health. This is a most excellent program, one that it would be well for auxiliaries themselves to inaugurate in their counties, so we trust that you will lend your hearty assistance when the work is taken up by the Federation.

Mrs. J. G. Montgomery, Kansas City, has been appointed Editor of the Women's Auxiliary Department of the Journal of the State Medical Association. I trust that the county presidents will send frequent reports of the activities of their auxiliaries to Mrs. Montgomery for publication in *The Journal* so that the auxiliaries may keep in touch with and stimulate each other.

We want to accomplish much toward the advancement of health education, but we must not lose sight of the fact that in our social relationships we are promoting a closer fellowship among the members of the doctors' families, and that this alone is worth the effort it costs to maintain an auxiliary.

Your for greater service and closer fellowship,

ANNA F. MCGLOTHLAN,
President Women's Auxiliary to the
Missouri State Medical Association.

BOOK REVIEWS

THE DISEASES OF CHILDREN. By the late Sir James Frederick Goodhart, Bart., M.D., LL.D. Aberd., F.R.C.P. Twelfth Edition. Edited by George Frederick Still, M.A., M.D., F.R.C.P., Professor of Diseases of Children, Kings College, London. Illustrated. Philadelphia. Lea & Febiger. 1926.

Only a medical student cramming for an examination could properly wax enthusiastic over a manual on any of the medical specialties. Pediatrics, like the other specialties, has long since outgrown the confines of the manual. Though this twelfth edition of Goodhart and Still contains nearly a thousand pages, it makes so brave an attempt to be all-inclusive that the treatment accorded to individual subjects is necessarily all too brief; four pages to pyelitis, three to eczema, for example.

Now, brevity per se need not be condemned. But this book, with 1926 printed on the fly-leaf, leaves out of account so many of the recent important advances in pediatrics, that it should not be recommended even to the harried student. The sections on therapy are particularly prone to be out of date. For example, intraperitoneal injection of salt solution, intravenous glucose, are not even mentioned in the section on marasmus. Intramuscular magnesium sulphate, or oral or intravenous calcium chloride are not mentioned in the section on tetany.

With regard to diphtheria, we read that a child of two may be given 3,000 units, "or even as much as

6,000 units" of antitoxin at a single dose, followed perhaps by a second dose of 3,000 units,—with no reference to the value of the very large initial dose or of the intravenous route in serious cases.

Elsewhere, instead of definite emphasis upon measures of proven value, we are all too often told that a little of so-and-so has sometimes been found beneficial.

As a compendium of symptomatology and diagnosis, the book has some merit. But as a source-book of modern infant feeding and pediatric therapy, it falls flat.

P. J. W.

BLOOD CHEMISTRY COLORIMETRIC METHODS. For the General Practitioner. With Clinical Comments and Dietary Suggestions. By Willard J. Stone, B.Sc., M.D., Pasadena, California. Attending physician, Los Angeles General Hospital and Pasadena Hospital. Introduction by George Dock, M.D., Pasadena, California. Second edition revised. Paul B. Hoeber, Inc., New York. 1926. Price \$3.25 net.

The outstanding virtue of this presentation of the subject is its succinctness. It should be of tremendous value to the younger internists who are trained in laboratory methods to have this at their side in setting up laboratories away from the large cities. But even they would have to look up the nomenclature in order to make sure whether cholesterol is the same as cholesterin, and whether the other writers of these subjects use the same standards and terminology, for the difficulty with our literature today is the multiplicity of standards—the French, the German, the British, and the American—and one needs some sort of handbook to translate the one type into the other.

The clinical comments are very worth while and should be of great help.

G. H. H.

NOUVEAU TRAITÉ DE MÉDECINE. Pathologie Du Systeme, Nerveux. Fascicule XIX. Publié sous la direction de MM. G. Roger, Fernand Widai, P. Teissier. Masson et Cie Editeurs, 120, Boulevard Saint-Germain, Paris. 1925. Prix, 80 fr.

Cerveau-Cervelet is the 19th volume of a complete and exhaustive work on internal medicine and when completed will consist of 22 large volumes. It is anticipated that four of these volumes will be devoted solely to the nervous system. This volume on the cerebrum and the cerebellum is the first one to appear on neurological topics. It consists of 1016 pages, with 261 ordinary illustrations and 46 special lithographic plates. The latter are splendidly executed.

The book is printed on a good grade of paper, and has a very clear, adequately large type. As is now the common custom for such works, the various topics have been written by fifteen authors. Among them may be cited some of the leading neurologists of France. In particular might be mentioned, Roussy, Lhermitte, A. Thomas and Klippel. Thus we have a fine group of monographs bearing on the various topics covering the entire brain in relationship to organic diseases.

Numerous syndromes are given due consideration. Rare topics such as the pallidal syndrome and the hepto-strial degeneration syndrome are allowed a considerable amount of space, but splendidly written. Twenty three pages are devoted to the labyrinthine syndrome by Hautant.

As an illustration of a complete monograph might be cited that of Andre Thomas which consists of 220 pages, or about one fifth of the whole volume, covering completely the cerebellum. The anatomy

and physiology are appropriately covered. Especially would I commend the protocols on experimental work with dogs and monkeys to illustrate physiology and pathology. The complete consideration of the various diseases of the cerebellum including trauma, vascular disturbances, abscesses and tumors, is worthy of praise.

While this is a voluminous work with many subjects covered minutely, it is written in a style easily read. Any one conversant with a fair knowledge of the French language can use this volume with much pleasure, and it should furnish valuable data bearing on the neurological subjects considered.

A. L. S.

PSYCHOLOGY FOR NURSES. By Maude B. Muse. Philadelphia and London. W. B. Saunders Co.

There is no doubt that this book is the best text produced along this particular line. The question arises, naturally, as to whether an instructor, who is herself well acquainted with both psychology and its applications in the field of nursing, would not use to better advantage a good standard text with this as a reference book for the students. But unfortunately, many of the instructors in our schools of nursing have not had college courses in psychology, and are acquainted with only a few texts. For their use, or for the use of any graduate nurse who wishes to read for her own benefit, this book will prove of value.

For use as a text to be placed in the hands of the students, there is a big question as to the soundness of the psychology in making so many applications of facts where the application is so perfectly obvious. A class now using the text—University students, they are—complains of this very thing; of being picked up bodily, so to speak, and hurled back into the ward. They indignantly proclaim that application of the facts is essential, but that they would like to make a few of them themselves. They seem to feel very much as the small boy feels who is given an electric train for Christmas, but who is not allowed to try it out for himself until New Year's day, because father and all the uncles and cousins are so busy showing him how it runs.

Another thing of which our students complain is the distraction of jumping from one thing to another with little or no connection to any logical whole. More than one example could be found very easily in the book. We shall cite one of the most obvious. On page 333 there is a paragraph in a section headed "Nursing the mind" which reads: "It is safe to predict that the graduate nurse of the near future will be unable to secure registration, however much she may know about the scientific care of somatic disease, unless she is equally well informed concerning the psychic disorders which may occur among normal people during illness." The question is not whether this is a "safe prediction," since legislation at no time seems to be a predictable thing. But what place has such a paragraph in a text for students of nursing early in their course?

Another grievous fault of the book is the fact that the author has tried after the fashion of so many who would write for nurses, to incorporate in one small volume material which should be divided into at least two. The consequence is that one finishes reading a chapter in a more or less breathless state, feeling she has been rushing to help put out a fire, this feeling being intensified, perhaps, by the extreme over-use of italics. Our advice would be that the author stick more closely to what belongs to general applied psychology, then take the remainder of the material, add to that too, and make a second

text to be used later in the student's course in connection with psychiatric nursing. If psychology is taught in the second semester of the student's course, as is advised in the revision of the Standard Curriculum, she is not yet ready for much that is contained in the book. She needs more complete treatment of the portions necessary to her own adjustment, and to the reading of her patient—any patient—aright. She needs more attention called to the deviations from the normal which may come to any patient, or to any individual under unusual conditions, rather than so much stress placed on the grossly abnormal.

G. H.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1925. Cloth. Price, postpaid, \$1.00. 90 pp. Chicago. American Medical Association, 1926.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1925. Some of these reports have appeared in *The Journal of the American Medical Association*. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked upon as the companion volumes to New and Nonofficial Remedies. While the latter describes the medicinal preparations that are found acceptable, the former contain reports on the products that were not accepted. The present volume contains reports on the following products which the Council denied admission to New and Nonofficial Remedies: Agrilin; Benzyl Viburnum Compound; Bichloridol and Salicidol; "Colloidal Gold"; Diabesan; F. & R.'s Genuine Gluten Flour; Gerioxide; Hoyt's Gluten Bran Flakes; Horse Dung Allergen-Squibb, House Dust Allergen-Squibb, LePage's Glue Allergen-Squibb and Street Dust Allergen-Squibb; Incitamin; Liposan; Loeser's Intravenous Solution of Calcium Chloride; Loeser's Intravenous Solution of Sodium Thiosulphate; Mercodol; Orargol; Parathyroid with Calcium; Pollen Extract Gramineae, Pollen Extract Chenopodiaceae, Pollen Extract Ambrosiaceae and Pollen Extract Artemisias-P. D. & Co.; Rayminol; Rheumeez; Mitysol; Some Wagner's Preparations; Tablets Calcreose with Iodine; Digifortis; Trepol and Neotrepol; Tricalcine; Viriligen, Glandular Comp. and Pineal Comp.; Vitalait (Vitalait Laboratory, Inc., Newton Centre, Mass.) and Vitanol.

The volume also contains reports on products which were included in former editions of New and Nonofficial Remedies but which will not appear in the 1926 edition because they were found ineligible for further recognition.

The volume contains reports of a general nature: for instance a report on the use and utility of digestive enzymes in therapeutics and a preliminary report on spleen and red bone marrow.

Physicians who keep fully informed in regard to the value of proprietary remedies will wish to own this book.

NEW AND NONOFFICIAL REMEDIES, 1926, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1926. Cloth. Price, postpaid, \$1.50. Pp. 459+XLIII. Chicago: American Medical Association, 1926.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually provides the American medical profession with disinterested critical information about the proprietary medicines which

are offered to the profession and which the Council deems worthy of recognition.

An examination of the preface shows that in addition to inclusion of the new drugs which were accepted during the past year, the book has been extensively revised. Many of the preparations listed in the previous edition have been omitted and the descriptions of others have been revised to bring the statements into accord with present day knowledge. Among the products that were accepted during the past year and which are included in the new edition are scarlet fever toxin preparations used to determine susceptibility or to establish immunity and curative scarlet fever antitoxin; a parathyroid extract of determined effect on the calcium content of the blood serum; two antimony compounds for use in trypanosomic infections; tryparsamide, developed in the Rockefeller Institute for Medical Research; tetraiodophthalein sodium for the visualization of the gallbladder and hexylresorcinol, developed by Veador Leonard.

The book contains a cumulative appendix (printed on buff paper), which is a list of references to reports of the Council and to other publications dealing with articles not described in New and Non-official Remedies. This appendix is thus a valuable and quite extensive bibliography of proprietary and unofficial preparations.

In reference to the work of the Council on Pharmacy and Chemistry, the Board of Trustees of the American Medical Association in their report to the House of Delegates stated that the success of the Council's endeavors will depend less on the work done by the Council than on the support that is given by the rank and file of the medical profession and that this support can be most efficiently given by physicians (and with fullest justice to themselves and their patients) by confining their use of proprietary medicines to those that have been found acceptable for inclusion in New and Non-official Remedies. The physician who desires to support the Council actively should therefore obtain a copy of the 1926 edition. Every physician has need for a book of reference such as this volume to which he may turn for trustworthy information with regard to proprietary medicines.

MISCELLANY

DUE PROCESS OF LAW AND EQUAL PROTECTION OF THE LAWS

(*State of Missouri ex rel. Hurwitz v. North et al, Board of Health of State of Missouri (U. S.), 46 Sup. Ct. R. 384.*)

The Supreme Court of the United States, in affirming a judgment of the Supreme Court of Missouri, says that the plaintiff in error (the relator) was a physician licensed to practice by the state board of health of Missouri. On complaint made to the board, and after notice and hearing, his license to practice was revoked on the ground that he had unlawfully produced an abortion. The proceedings before the board were reviewed on certiorari by the state circuit court and the determination of the board sustained. On appeal to the Supreme Court of Missouri, the judgment was affirmed (264 S. W. 678, 304 Mo. 607).

By section 7336 of the Missouri revised statutes, the state board of health is authorized to grant licenses for the practice of medicine within the state,

and, after hearing, to revoke licenses, "for producing criminal abortions" and for other specified causes. Hearings are required to be on twenty days' written notice, personally served on the physician against whom charges are made, containing "an exact statement of the charges and the date and place set for hearing." The statute provides that:

Testimony may be taken by deposition, to be used in evidence on the trial of such charges before the board in the same manner and under the same rules and practice as is now provided for the taking of depositions in civil cases.

It is also provided that proceedings before the board may be reviewed by the state circuit court on certiorari and, as was done here, an appeal may be taken from the judgment of the circuit court to the supreme court of the state.

The plaintiff's assignments of error assailed the correctness of various rulings of the state court as to the meaning and effect of the statute drawn in question. Those assignments must be disregarded here, as on writ of error to a state court this court is bound by its construction of the state law. The Supreme Court of Missouri held that, in the proceedings for the revocation of the plaintiff's license, he was entitled to take testimony on deposition, as provided by the statute, but not to subpoena witnesses to appear before the board, and that his application for such subpoena was properly denied. It was assigned as error that these rulings and the revocation of the plaintiff's license by the state board of health were a denial of due process of law and of the equal protection of the laws under the fourteenth amendment to the constitution of the United States. It has been so often pointed out in the opinions of this court that the fourteenth amendment is concerned with the substance and not with the forms of procedure as to make unnecessary any extended discussion of the question here presented. The due process clause does not guarantee to a citizen of a state any particular form or method of state procedure. Its requirements are satisfied if he has reasonable notice, and reasonable opportunity to be heard and to present his claim or defense; due regard being had to the nature of the proceedings and the character of the rights that may be affected by it.

The procedure authorized by the Missouri statute, as it was applied by the board, satisfied these requirements. The notice prescribed was reasonable. The testimony of all witnesses who appeared before the board was taken and recorded, including that of the plaintiff in error. Although the statute did not authorize the board to issue subpoenas, the plaintiff in error was authorized, as the state court held, to take the depositions of witnesses who did not voluntarily appear. Officers who take depositions are authorized to compel witnesses to attend and give testimony (Rev. Stat. Mo. 1919, sec. 5460). The depositions, when taken, may be read at the hearing before the board. The procedure prescribed and followed here gave ample opportunity to the plaintiff to make a defense to the charges preferred, and there was no denial of due process.

Nor did the statute deny to the plaintiff in error the equal protection of the laws. A statute that places all physicians in a single class, and prescribes a uniform standard of professional attainment and conduct, as a condition of the practice of their profession, and a reasonable procedure applicable to them as a class to insure conformity to that standard does not deny the equal protection of the laws within the meaning of the fourteenth amendment. (*J. A. M. A.* August 28, 1926.)

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 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

PREVENTION OF BLINDNESS*

PARK LEWIS, M.D.

BUFFALO, N. Y.

Preventive medicine as a definite movement is of comparatively recent origin. Its most rapid development has occurred during the past two decades. It is the direct result of research which brought to our knowledge the origin of disease. When it was learned that our most destructive epidemics were produced by organisms which while infinitely small were nevertheless definite entities, the foundations were laid for the great advances that have since been made. We need but to recall the devastation produced by yellow fever, diphtheria, bubonic plague, and typhoid, to realize the benefits to humanity that have arisen from the application of preventive measures in these forms of disease. It is but a logical development of the intelligence of today which finds its expression in a closer study of society. We all are studying as we never have before the causes of poverty, the causes of crime and even the causes of war. There is hope then that we may be able to lessen the incidence of so serious a human affliction as blindness, the economic burden of which is not lightly borne. It is appropriate too, that a movement of this kind should be under the authority and with the cooperation of the medical profession because it is only those who, in their daily experience are faced with blind eyes that have been needlessly lost, can know the extent of the problem and advise as to the measures that can be taken to prevent these losses.

Of course it must be known to all that the aim of the medical profession has always been to prevent as well as to cure disease. But when an injury has been suffered, when disease has been acquired and when the damage has been largely accomplished, it is the physician who is then called upon to undo that which should never have occurred. The prevention of those

conditions which result in blindness must be taken before blindness has occurred. We must seek not only the immediate but the remote causes which have contributed to it.

This leads to the study of the environment, of the manner of life, of the habits of people, as well as of the nature of the direct agent which is responsible for the immediate cause of the disease. It is a social problem as much as a medical one. The antecedent conditions are those of society. Their control requires the co-operation of the laboratory, of the practitioner, of the health authorities, and of the public.

It may not be unprofitable to occupy a little time tonight in considering the character of the problem which is set for us to solve, in estimating its relative importance in a busy community where there are many other interests inviting attention, and to recall what has already been accomplished and how preventive measures may most effectively be carried out.

WHAT PROPORTION OF BLINDNESS IS PREVENTABLE?

It was estimated more than half a century ago by careful statisticians that of all the blindness that then existed, one third should never have occurred, one third might, had proper measures been taken, have been avoided, and only the remaining one third was regarded as inevitable. More recent investigators have considered that 50 per cent. of the actual losses were needless ones. In Missouri careful investigations have been made by Lamb in studying causes of blindness in those making application for pensions. Lamb found that of all the blind examined the enormous proportion of 68 per cent. might have been prevented had the right thing been done at the right time and in the right way.

In analyzing these statistics the fact that we may determine the proportion that could have been prevented or cured would indicate that the causes of many of them are known and methods of prevention could have been applied. The questions will now occur, "Then, why was it not done?" The answer is unfortunately simple. There will always be those who are in-

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

different and negligent and careless, who will fail to avail themselves of the means offered to them unless they are stimulated by constant urging on the part of others so that even in those cases which are most easily controllable, losses will continue to occur unless the efforts that are made to prevent them are continuous, unremitting and urgent. In order that there may be no false hopes aroused in those who are in danger of going into the darkness, let us at once make clear that there are still many unsolved problems, that the highest attainment of medical skill is not by any means always able to preserve the sight, and that, therefore, we need continued research in order that new and better methods may be devised as time goes on. But there are many other conditions the nature of which is now very fully known. These may be roughly grouped under the following heads:

1. Preventable infections, especially those affecting the child at its birth, such as ophthalmia neonatorum.

2. Inherited congenital defects, dependent upon syphilis as well as those inherited from congenital blindness of the parents.

3. Avoidable accidents and injuries.

4. Trachoma.

5. Those due to the neglect of the eyes of the school child.

6. Those due to the failure during adolescence to secure prompt and efficient treatment for sight threatening diseases, or to the neglect to continue treatment in such cases after disease has begun.

I will say a few words in regard to each of these in order that we may draw some general principles, which perhaps may be applicable to all.

Concerning the birth infections by which babies' eyes are destroyed, the world is already pretty well informed. The medical profession, ever since Crede's epochal discovery of the value of silver nitrate in birth infections in 1881, had been using its effort to prevent the frightful waste of human eyes that has been going on from time immemorial. Papers were read before medical societies and laws were enacted, largely at the instigation of my esteemed colleague and fellow citizen, Dr. Lucien Howe, to develop a greater degree of responsibility among midwives, to whom the neglect of proper care of these conditions was largely attributed. But, notwithstanding all the efforts that had been made, in the year 1915, thirty-four years after Crede had told the world what to do to avoid these conditions, the total number of new admissions in the schools for the blind in the United States showed that one fourth were still victims of this preventable and controllable disease. Then it became evident

that if it were to be controlled the public must be taken into the confidence of the medical profession and fully informed in regard to its nature, its causes and its cure.

The American Medical Association undertook to do this. The committee of the Association, appointed by the president, was composed of an ophthalmologist, a sanitarian, who was a public officer, and an obstetrician. Subcommittees were appointed in every state and were similarly composed. Public addresses were given everywhere. Pamphlets were prepared under the direction of the American Medical Association for popular distribution. At the same time the active work of the National Committee for the Prevention of Blindness was begun. It was the original intention of the Committee as it was with that of the American Medical Association that the attack should be made upon the infective blindness of infancy, but this was only one of the many phases of the conditions that had to be studied. The consequence of this combined attack, lasting through a period of fifteen years, has reduced the number of admissions to schools for the blind by one half, the total number admitted last year being only about 13 per cent. But eyes are still being lost from this cause and gains that have been made indicate simply that the same measures must be continued to an even greater degree until every prospective mother, knowing the possible danger with which her child is menaced, will insist that proper means be taken for its protection and care. Ophthalmia neonatorum no longer heads the list. Here in the Southwest it is trachoma; and the efforts which have been made by the Missouri Association for the Prevention of Blindness in the assistance which it has given to the United States Public Health Service and its work at Rolla will be of the greatest benefit in encouraging further research as to the origin and methods of transmission of this world wide malady.

Elsewhere in the United States hereditary conditions have been one of the most productive causes. Since the year 1900, when the Abbe Mendel's paper on heredity was rediscovered, attention was more actively directed to the perpetuation of visual defects through parental transmission. It is not those who have become blind through accident or disease whose progeny carried on the affliction; their children may be perfectly normal. But in those who are born blind as a result of inherent defects in the eyes, the mating with another having a like defect will be sure to produce blind children.

An unfortunate instance of this kind occurred in the New York State School for the Blind

three generations ago. Two of the pupils through propinquity after leaving the school married. They were neither of them of a high grade of intelligence. The crossing of the two defective strains left little chance for the progeny. Since the union of these unfortunate people, whose history can now be traced back through six generations, there have been 18 blind individuals brought into the world and that unhappy marriage has already cost the state of New York over fifty thousand dollars. Efforts have since been made to keep the adolescent blind apart because of many other reasons than that they should not mate together. A little wise guidance at the right time, a little helpful assistance if necessary on the part of the state for these young people who were wholly ignorant of the crime they were committing against beings yet unborn, without lessening their own happiness or using any other measures than moral suasion, might have prevented the planting of the roots of this tree whose branches will probably go on producing fruit world without end.

PREVENTION OF CONGENITAL SYPHILIS

Another of the very common causes of blindness is congenital syphilis. It is not necessary to explain in detail the degenerative changes that are found associated with this disease. When the mother is so infected, premature births and still born infants are common. When the child survives the stigmata begins to appear as he develops. Certain deformities of the mouth and teeth with often an inferior mentality are present. One of the most serious of its manifestations is an invasion of the eyes in a form termed interstitial keratitis, in which the first eye and later the other becomes covered with a dense vascular cloud resulting in many cases in complete blindness and always leaving diminished sight. This may appear at any time from the first year until middle life. It is during the years of adolescence that it is most frequently found. It may continue for months or even years. Unhappily, it is one of the eye diseases which is least influenced by treatment and under the most favorable conditions the results are so unfortunate that it is one of the chief contributing factors to the population of our schools for the blind.

Within the last two decades a contribution has been made to medicine which is of such importance that its possibilities as a sight saving measure are even greater than that of Crede of half a century ago. It has been practically demonstrated by the ablest syphilologists throughout the world that the accepted treatment of a few doses of arsphenamine or its equivalent to the expectant mother, will, with

almost absolute certainty, result in the birth of a normal child.

Williams, Professor of Obstetrics at John Hopkins University, finds that "the syphilitic woman is peculiarly responsive to antileptic treatment, and that when adequate measures have been taken *90 per cent. of the children born have been normal.*"

Professor Wile, of the University of Michigan, writes me that in connection with the very large clinics of the obstetrical ward of the University Hospital, he has treated many hundreds of syphilitic women and can recall no case in which any one of these children has subsequently developed interstitial keratitis.

In appreciation of this vitally important fact it was urged by the section of Diseases of Children of the British Medical Association that in the light of the difficulty of the cure of congenital syphilis, the necessity of treating the syphilitic pregnant woman should be brought to the attention of the Ministry of Public Health. But great bodies move slowly. Prenatal clinics with their immeasurably helpful influence in so many other directions are being instituted, but as yet this knowledge is made to reach one when it should reach hundreds. There is no mother who would not make any sacrifice to preserve her baby from a wretched inheritance that carries with it a possibility of ultimate blindness. She should be informed of the danger that threatens her child and how to save it.

If it be true, as statisticians have told us, that one of ten of the women in the clinics will be found to be syphilitic and that during pregnancy this disease is peculiarly amenable to treatment, and if such treatment does prevent one of the most lamentable forms of eye disease, than in behalf of the coming generation, and as a measure for economic protection to the community whose charges many of them will some time become, *some plan should be adopted by which this measure of protection should be made available to every woman by whom it is needed.* This is almost equally true concerning the infection of ophthalmia neonatorum. Effective treatment of the mother before the child is born will in a large proportion of cases prevent the infection of the child, but in any event the mother should be warned of its danger and of the necessity of prompt treatment should it occur by which it may be controlled without injury to the eyes of the child.

PREVENTION OF ACCIDENTS AND INJURIES

Another extremely common cause of unnecessary loss of eyes is due to accidents and injuries, which occur in industry and in the ordinary affairs of life. For the prevention of

these accidents the captains of industry must cooperate in urging the necessity of protective devices and the men must be urged to use them. Lest they forget, these warnings must be repeated frequently and every means adopted to get prompt and effective help when they occur.

The accidents due to negligence and to the careless handling of dangerous explosives is far larger than it should be. The use of toy pistols and other explosives on Independence Day especially is followed every year by a large number of ruined eyes. The *Journal of the American Medical Association* some years ago, undertook to institute a campaign of information so that people might be advised of these dangers and instituted what came to be known as a "Safe and Sane Fourth." This was taken up by the press of the country, which is always ready to further a progressive sanitary movement. Hundreds of articles appeared before the time came for the celebration. The results showed that people needed simply to be warned in order that better precautions should be taken to avoid these accidents. The numbers of accidents immediately dropped. The next year, a similar campaign was carried on and then the next and then, on the supposition that the people had been sufficiently well educated to take these precautions, the matter was dropped. But a new generation was growing up, the manufacturers of explosives were anxious to sell their wares and very shortly the accidents began to increase again. So in this as in every other protective measure it is evident that "eternal vigilance is the price of safety." Warnings must be given not once but periodically whenever the necessity arises in order that these losses may be limited to the smallest possible number.

There is no seasonable time in which accidents happen in industry. The failure to use protective devices or the use of goggles when men are engaged in the use of lathes or hammering metal has been an extremely prolific cause of eye injuries. So much so that the great industries like the United States Steel Corporation the railroads and other bodies of that character, make their safety work as important a part of their regular activities as that of the accounting, the sales, or any other department. But the small factories and workshops are not reached and there accidents are just as liable to occur as in the great ones. The necessity exists therefore for supervision over the workshops in order that proper protection may be always afforded. It might be considered by the Department of Public Health.

TRACHOMA

We used to think that we had little trachoma

in this country. We now know that there are great areas that are infected with it and the entire country is indebted to the efforts which you in Missouri have made in the support of the United States Public Health Service in their endeavors to wipe it out in the Southwest. We are sincerely hoping that the work in Rolla may give us a clearer insight into its origin and prevention.

Trachoma can be annihilated only when there are insistent and continuous efforts made to clean it up in every section where it may be found and when that is done there must be such bettering of the sanitary conditions in which these epidemics are found that the internal resistance of the inhabitants will be adequate to prevent their recurrence.

THE SIGHT OF SCHOOL CHILDREN

The ophthalmologist's connection with the school work ought to be very close. When children having marked ocular defects other than myopia are put in classes with those having normal eyes and full visual acuity, one of two things must happen: (1) the former will be overlooked and become repeaters unless they are unusually clever mentally, or (2) the progress of the whole class is retarded by reason of the unusual attention which must be given to the defective ones.

In comparatively few cities throughout the country have the necessary classifications been adequately made. The City of New York has only sixty such classes, the City of Buffalo with over half a million of inhabitants has but two. The Buffalo Department of Public Health, however, has recently inaugurated an excellent piece of work. Before classes can be formed and suitable curricula instituted for those handicapped children it is necessary that their number, the character of the defect which limits their sight, and the amount of eye work which they may be permitted to do, shall all be accurately determined and the size of type which they may be allowed to read, if indeed they are permitted to read at all, definitely prescribed by the ophthalmologist under whose charge they have been.

To ascertain these facts no new officials nor added machinery are required. During the course of the year a visual test is made of every child in the public and parochial schools.

A form prepared by the Sight Conservation Department of the Board of Public Health must be filled in and if the pupil is found to fall under any of the following divisions he is to be referred to one of the sight saving classes. These include all children who cannot read more than 20/60 at distance nor the second size of type at a nearer range, myopes

having more than eight diopters of myopia, children having progressive myopia, hyperopes having more than five diopters of hyperopia with asthenopia, children with astigmatism of more than 3.5 diopters and whose vision cannot be brought up to more than 20/60, children with maculae, nebulae, leucomae, which interfere with sight and lead to eye strain, children with keratitis especially of the interstitial type with low vision, children having congenital cataracts, congenital malformations, and all cases having a chronic disease of the fundus, where the vision is 20/40 or less. It is assumed that these conditions exist after the proper refractions have been made. Constant touch is kept up with the attending oculist and they are sent to him for refraction at such periods as he may indicate. These forms have just been introduced and it is proposed to distribute such blanks to all of the ophthalmologists and others having to do with children with the request that in every case in which such visual defects are found, they should be filled out and filed and that the child should report to the eye surgeon as often as the nature of the case may require. Upon these forms are records to be made of the amount of vision in each eye, corrected and uncorrected, a diagnosis of the condition found. An answer to the inquiry, "Will study be harmful to this child? Is the condition fixed?" With such added remarks as it may seem desirable to make.

Under the heading "Recommendations" is space to be filled in by the physician. "Is the amount of eye work permissible limited or unlimited?" Is the child a subject for the conservation class or a Braille class and when should he be re-examined?" This brings the school and the ophthalmologist into so close a degree of cooperation as to be of the highest usefulness to the pupil and most helpful both to the teacher and to the doctor. It will prevent the neglect that so easily occurs concerning important conditions when there is no localized responsibility to see that directions are systematically carried out. It will probably do much more by establishing a deeper interest on the part of the ophthalmologist upon the daily demands that are being made in all of our schools upon the eyes of all the pupils in the routine of their regular work.

The correction of visual defects causing eye strain have been relieved in such a multitude of instances by the use of properly chosen glasses that we have come to regard the mechanical measures as the only way in which such troubles may be relieved. In the normal healthy young animal, the eyes may easily overcome the minor degrees of hyperopia and of myopia, of far sight and of near sight by simply limiting the

amount of close work to which they are subjected, which in very many cases in any event should be done. If eight hours is as much as a strong and well adult should give to labor, should more than that be given to work by the developing adolescent?

With changed conditions of teaching and of study as has been shown in some of the Canadian schools, all the studies included in our high school course are carried on with at least an equal degree of efficiency, the entire work being confined to the usual hours of the school day.

If our overworked and generally highly efficient teachers, our oculists and the parents of the children were to confer together I am sure that measures might be devised in which the children might make equally satisfactory progress as they do today at a cost of vastly less eye work and nerve strain.

THE "FOLLOW-UP" IN CLINICS

Another cause of needless blindness, and one which doubtless is very large although we are only beginning to investigate it, is the failure to follow up threatening cases when they fail to appear at the clinics after one or two visits.

A committee of leading ophthalmologists who have been studying the Associated Out-Patient clinics of the five larger eye hospitals in New York City examined some 5,200 records of patients, none of whom had made his first visit to the clinic less than a year before, so that sufficient time had elapsed to dispose of the case satisfactorily. The study of these records show, says *The Modern Hospital*, that of 193 selected cases, selected because they represent diseases which if they were neglected would result in blindness, 53.4 per cent. attended the clinic only once, only 15 per cent. attended more than 5 times. The same point is brought out still more forcibly in the instances of certain especially serious diseases. Eighty three per cent. of the cases of purulent conjunctivitis, 80 per cent. of the cases of syphilitic retinitis, 75 per cent. of the tuberculous keratitis, 69 per cent. of corneal ulcer attended clinic *only once*. Eighty-one per cent. of the cases of glaucoma made *3 visits or less*. None of the cases of retinitis, optic atrophy or purulent conjunctivitis made more than three visits. The clinic clearly assumes some responsibility for its patients. That such a large proportion of patients presenting eye conditions which may lead to blindness and the accompanying financial disability does not return for treatment is a stigma of failure on the part of the clinic to assume this responsibility that the administrative and medical authorities can scarcely face with equanimity.

SUMMARY

Let us then summarize briefly some of the more obvious ways in which eyes are lost that should have been saved and see if any practical suggestions can be made for their more general protection.

If we take the groups which contribute most largely we shall find that they come under the head of local infections, of accidents due to carelessness, or the neglect of suitable precautions, the transmissions of bad heredity and the failure to heed some of the small beginnings that lead to disastrous endings.

The classes include the infants and young children, school children with myopia which is increased by over use, industrial workers and those to whom accidents are likely to occur, the trachomatous wherever found, and those needing advice and care, reluctant to accept charity and yet unable to meet the cost of special skilled medical or surgical service.

In all of these there is one common element present. It is the failure on the part of those most deeply interested to know or to appreciate the dangers to which they are exposed. Then knowing them there is the inertia common to humanity everywhere. Hope springs eternal in the human breast. We like to persuade ourselves that however bad things are today they will be better tomorrow, and expectancy takes the place of action. Moreover, to the sons of toil to whom a day's work means a day's bread it is often so costly to secure the needed help when it would do the most good that precious time is lost till irreparable mischief has been done.

THE REMEDY

The remedy would first seem to to be publicity, widespread publicity concerning all the phases of preventive medicine. When the intelligent public once learns how its human resources are being wasted, there will be no doubt as to its readiness to join in any movement for their protection. The necessity should be emphasized of regular periodic physical examinations of everyone, that disease may be anticipated. The initiative should of course be taken by the medical profession in conjunction with the public health and school authorities.

Real advances will be made when the program of no medical society, national, state or local, will be considered complete, that does not include sometime in its annual meetings at least one session devoted to a popular consideration of preventive measures including that of blindness.

Our dispensary methods must be revised. They entail the greatest amount of labor and the largest expense with the smallest propor-

tionate returns. They demand too much from the younger medical men who serve without pay and who have no opportunity to gather from this wealth of teaching material, the lessons which may be learned. To them should be applied the efficiency methods of modern business. Spend a day in tracing these cases to their homes and the necessity of revising the system will be apparent. It would be helpful if representative members of the medical societies, of the health boards, and of the citizens at large, would form a joint committee to study the conditions under which the eyes of the children are used, at school and in the home, the hours of study, the character of the light and the many other sources of strain which we now try to remedy by the one mechanical expedient of prescribing glasses. We would find that necessary and important as these are they would be less often required if greater consideration were given to the way that the eyes are used.

You are indeed to be congratulated that in Missouri you have not only a large number of scholarly and able ophthalmologists who are actually concerned in preventive work, but you have as well a public sentiment aroused and stimulated through the enthusiasm of your leading citizens which has made the Southwest one of the most effective centers for the prevention of blindness in the United States. It is only through such cooperative movement that we may have each year progressively to lessen the number of eyes that are annually lost.

Near a little town the main highway ran along the edge of a ravine. So many people driving along this road fell over the precipice that the benevolent and thoughtful citizens of the place planned to build a fine modern hospital to care for those who were injured, and were about to erect it when some one quietly observed that perhaps it might be better if a wall were built to keep people from falling over.

Is it not possible that if we were to build more fences, that fewer hospitals and asylums, fewer poor houses, schools and pensions for the blind would be required?

454 Franklin Str.

THE SURGICAL GOITER*

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Agnew remarked forty years ago that surgery of the thyroid gland was inadequate and

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unsettled. He voiced the opinion of the active surgeons of that time in this statement. In those days any attempted operation for the removal of a goiter was considered hazardous.

We must admit that the old time treatment for cystic conditions of the thyroid was almost

normal thyroid gland is, functionally or histologically? Time will tell whether the thyroid gland is the dominating factor in abnormal metabolic rates or only one of several factors concerned in such a regulation.

Thyrotoxicosis seems to have a marked effect on endocrine glands, manifested oftentimes by signs of varying dysfunction, such as fatigue, blood pressure changes, loss of weight, lowered or increased libido, and many other manifestations familiar to us all. There is probably no tissue in the body that may not be affected sooner or later by these poisons. Such effect may be found in the muscles, liver, kidneys, blood and bloodvessels, heart and nervous system, and the reaction of these organs helps constitute the reserve force of the patient. A most vitally helpful factor to the surgeon is the amount of actual cardiac and the general bodily reserve that the patient has available at operation. Prior to operation it should be the aim of all treatment to secure complete rest and convert the potential reserve into actual reserve by eliminating acidosis from low grade starvation processes, as well as the leucomains evolved through excessive catabolic activity; and concomitantly to build up the worn out tissues by increased feeding and such medication as may be a necessary adjuvant.

Where toxemia has caused a marked cardiovascular deterioration the prognosis is bad. The same is true for those nervous types of patients who present the severer forms of psychoses, neuroses, or depressive insanities. In an effort to condense them into practical



Fig. 1. Old degenerated adenomatous colloid goiter in a woman 64 years old. Cysts and hemorrhage as well as hyaline, calcareous and fibrous degenerations present.

inhuman, yet it was the best they had. The thought of the pain and prolonged convalescence that must have been endured by the patient, following the plunging of a trocar into a suspected cyst, with evacuation of its contents and injection into the cavity thus obtained of perchloride of iron, zinc chloride, or carbolic acid in concentrated solution, is enough to make us shudder, as we contemplate such a situation.

Today we have a satisfactory and safe technique for removal of the various kinds of goiters, and our mortality from goiter operations is exceedingly low. The operative mortality for nontoxic goiters is practically nil, while the death rate from toxic goiters depends upon the degree and duration of their toxicity and the amount of reaction the individual has to these poisons, as well as the preoperative care of the patient, and the skill, experience and common sense of the surgeon.

Toxicity today is measured by the metabolic rates as well as the clinical picture in all thyroid disorders, and while metabolic disturbances have been shown in many conditions outside of thyroid dysfunctions, one still may wonder whether the thyroid may not have a wider range of activity than we now believe it to have. After all, do we know exactly what a



Fig. 2. Same as Fig. 1. Six weeks after operation at which time practically no normal thyroid gland substance was palpated. Complete recovery.

groups, we have attempted the following classification for surgical goiters:

1. All goiters causing pressure symptoms, obstruction, deformity, or annoying ugliness.
2. Certain types of thyroiditis and strumitis.



Fig. 3. Part of goiter removed from patient in Figs. 1 and 2. Note the various types of degeneration seen in this gland as outlined in Fig. 1.

3. All early toxic goiters which do not show improvement of symptoms under systematic treatment within a reasonable period of time.

4. All nodular adenomatous goiters, regardless of the size of the nodules or the toxicity of the goiter.

5. All typical cases of exophthalmic goiter of Graves' disease and certain atypical cases. (*Formes frustes*.)

6. All operated but uncured goiters, where the patient shows symptoms of continued toxicity. (These cases have not been sufficiently operated and may be cured by subsequent surgery.)

1. *Goiters Causing Pressure Symptoms.* We may find pressure symptoms caused by goiters due to hypertrophic, hyperplastic, inflammatory, or neoplastic enlargements. Such goiters may be bilateral or unilateral and may have nodules that are large or small, single or multiple. We may have symptoms from aberrant or accessory thyroid glands in the chest, neck or distant part of the body, as those found near the ovary. Because of the embryological development of such glands, they should be found in the region of the thyroid gland. Goiters, when substernal, subclavicular, intratracheal and intrathoracic, may be found difficult of recognition and more difficult to remove. Diagnosis may be established in doubtful cases by Roentgen rays and bronchoscopy in addition to the usual serological tests. Mendel reported in 1906 one fatal case of lues of the thyroid and therefore one must not fail to use the laboratory to exclude this disease.

Calcareous degeneration of a goiter while not always serious, oftentimes is not diagnosed and may be classed as a malignancy, although a differential diagnosis should not be difficult.

Thyroid malignancy is fatal and about 90 per cent. of all such malignant changes occur in old goiters. The younger people seem to have sarcomatous changes occur in them more frequently while carcinoma is the predominant malignant change occurring in older people. It has been said that 44 per cent. of all goiter cancer occurs between the ages of forty and sixty years. Some of these malignancies or their metastases may be deeply placed, and when unrecognized may require emergency tracheotomy to save life; but occasionally the growth will be found below that point where tracheotomy can be successfully used.

These goiters are fatal because the cells get into the veins and may spread rapidly through the blood stream to any tissue in the body, although a preference seems to exist for deposits to be implanted in the flat bones and the lungs.

Again, the capsule of the thyroid gland is thin and when the cancer has penetrated that capsule, it soon spreads by direct contiguity and involves the carotid sheath, muscles, fascia, nerves, bones, etc., until death occurs to the patient.

Cancer of the thyroid is often overlooked when symptoms of hyperthyroidism are present in a gland that may be hard, adherent, painful or tender. We must not forget that the thyroid cancer cell secretes substances that are believed to cause any or all of the symptoms of hyperthyroidism.

Therapeutically, we have no cure for cancer of the thyroid gland. Roentgen rays are of little or no value. Thyroidectomy should not be attempted in a case of definitely diagnosed

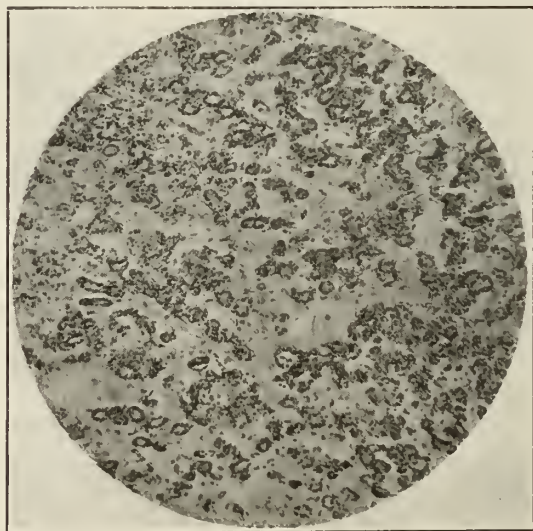


Fig. 4. Section from area of small tumor mass just adjoining capsule at its upper part, showing secondary acinar interstitial proliferation in degenerative masses and beginning contracting process prior to formation of fibrous tissue. Very little colloid material seen in these lumina.

cancer. An early diagnosis of cancer of the thyroid is difficult, while the late cases can nearly always be recognized. Radium needles implanted in these goiters at time of operation, as is done to the cancer area in malignancy of the glands of the neck, would seem to be the most rational treatment at this time, but because of the early metastases that occur it makes us feel that any local treatment must be of little or no value.

2. Strumitis and Thyroiditis. Whether a strumitis or thyroiditis be toxic or bacterial in origin makes no difference, as it is possible for either of them to become surgical conditions. A nonsuppurative inflammation of the thyroid today may become a suppurative condition tomorrow. A toxic thyroiditis may follow any acute infection and usually does not require surgical interference; but a bacterial deposit in the gland may cause early suppuration, and one may find a sudden sense of fullness in the region of the thyroid, with tenderness and associated temperature, dyspnea, a hot and painful throat made worse by deglutition. Ligneous thyroiditis is a surgical condition from the start and thyroidectomy seems to bring safe, quick results. Tracheotomy always has seemed dangerous to the writer, where open operation could be done for suppurative conditions occurring under the deep fascia of the neck.

3. Early Toxic Goiters. One has to be careful in classifying all early toxic goiters as surgical. We feel that many of these goiters will disappear either because of, or in spite of treatment of the nonsurgical variety; but we also believe that once an adenomatous nodule

can be felt in an early toxic goiter, operation will be necessary sooner or later. The sooner operation has been performed the less toxic are the changes that may occur to the other bodily tissues from such a tumor and its periadja-cent hyperplasia.

The adolescent goiters occur mostly between the ages of eleven and sixteen. Many of these regress on iodine treatment. Others seem to



Fig. 6. Adenomata on outside of gland. These nodules may be easily palpated on careful examination while making a diagnosis.

melt away after the menses have been established. But prophylactic treatment gives the best results. Use iodine during the early years and prevent goiter. A goiter once established may not be improved by iodine treatment, and in some cases this drug actually aggravates the symptoms. We believe that the adolescent goiters that become toxic and do not respond within three months to systematic treatment after the establishment of the catamenia, are to be considered as surgical. If there is improvement under nonsurgical treatment such cases should be continued on treatment, at least so long as there is no great degree of toxic deterioration to the heart or nervous systems during the postadolescent period. Some of these enlarged thyroid glands disappear during pregnancy while others are made worse by this phenomenon. One of our cases, a girl aged 16 years, with a very large soft colloid goiter, resisted all forms of treatment until bilateral ovarian cysts were simultaneously removed at an operation for a case of subsiding acute appendicitis. Within four weeks following operation the thyroid gland had melted away, seemed normal to outward appearance, and never has reappeared to date (two years later). A similar case occurred in a girl 28 years of age. Many of these early glands that take on hyperplastic changes and toxicity gradually regress and as such may remain reduced in size and potentially inactive for years, but many of them will unquestionably fall in one of our other classified groups, sooner or later, and become operable.

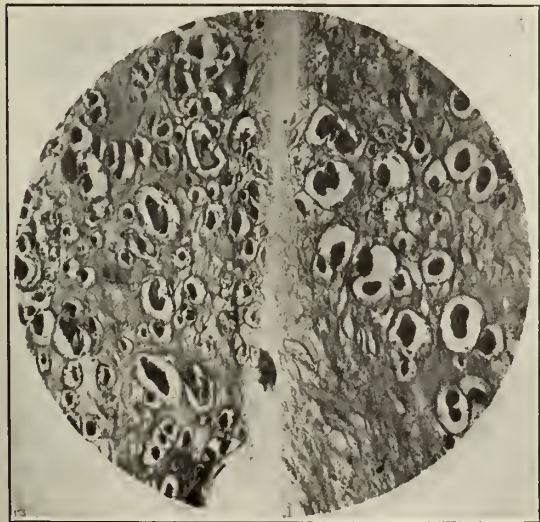


Fig. 5. Section from old fibrous area same gland, showing last stages of tissue changes where cells have all been killed in mass of fibrous tissue and only islands of degenerated colloid remain more or less isolated. Taken from goiter shown in Fig. 3.

4. *Nodular Adenomatous Goiters.* We must differentiate between hemorrhages and cystic degenerations of the thyroid, as well as those tumors that comprise the nodular goiters, and constitute the bulk of our surgical cases. We know that a hemorrhage from a goiter may cause death, but it usually is not dangerous, except that it may be the forerunner of hyperplasia or subsequent degeneration. Nothing

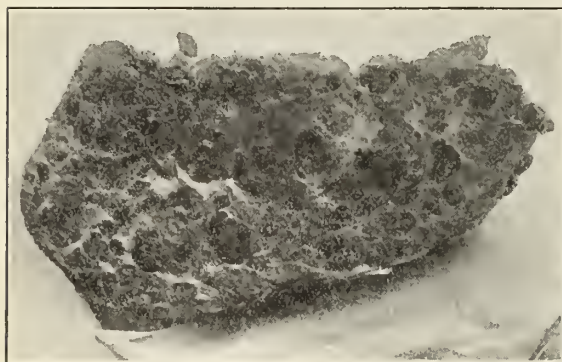


Fig. 7. Multiple adenomata in colloid goiter or adenomatosis of colloid goiter with degeneration. Cross section of larger tumor.

seems to be such an excellent medium for proliferation of the acinal cells to form new alveoli as fresh blood, and we know that hyperplasia sooner or later is followed by toxicity.

Hemorrhage in fetal adenoma of interstitial type undergoes hyalin degeneration, becomes absorbed, or it becomes mucoid and develops secondary alveoli of the fetal type.

We are not sure that degenerative transformation to adenomatous masses means toxicity in all cases, or whether such toxins are due to associated hyperplasia of uninvolved areas, whether adjacent or remote. Probably toxemia occurs from both.

A thyroid may have attained its enlargement by successive stages of hyperemia, hypertrophy, hyperplasia and degeneration, and its nodules may have been developed continuously or intermittently. But whether the nodules are the size of a pea, or as large as an orange, the size is not always an indication of the toxicity of the gland. All adenomas are nodular, but they vary in their pathological importance.

The fetal adenoma of Wolffler is derived from embryonic thyroid epithelium which exists as implantations or rests that persist after cell differentiation to the remainder of the gland has occurred. It is usually a definite tumor before the twentieth year of life. Clinically, these early adenomas are nontoxic and slow growing, but if toxic are only slightly so. They may be single or multiple and are supposed only to be associated with toxemia

through some degenerative process or an hyperplasia of nearby gland substance. They may metamorphose into adenocarcinoma, carcinoma or sarcoma. In such tumors hemorrhage is common and the alveoli have no lumen and very little interstitial tissue. They possess centrifugal type of growth that allows only the centrally placed nodules to have a little colloid and stroma.

Other adenomas, not of the fetal type, are believed to develop from a colloid goiter in which there has been an excessive epithelial overgrowth resulting in the formation of these new alveoli, between the older ones and, according to Ewing, the condition often suggests a neoplastic process. These small nodules are outlined by their septa and seem to be slow growing, and after a time reach a certain dimension and further growth ceases. These new alveoli develop into "colloid holding vesicles" and may develop in the interstitial tissue as well as in intra-acinal places. The development of diffuse adenomatosis, as recently brought to our notice by Goetsch and Else, does not give the pathological picture seen in the large adenomas and yet after this diffuse nodularization of very small areas becomes very large, they may develop into adenomas, the condition being a step farther in the life history of the adenomas.

Clinically these patients may be in a quiescent stage or a markedly toxic condition. The old adenomas that are toxic usually show their hosts to have suffered from a severe deterioration of the heart and nervous systems. The reserve strength of such patients is low and there is little or no normal thyroid tissue to be

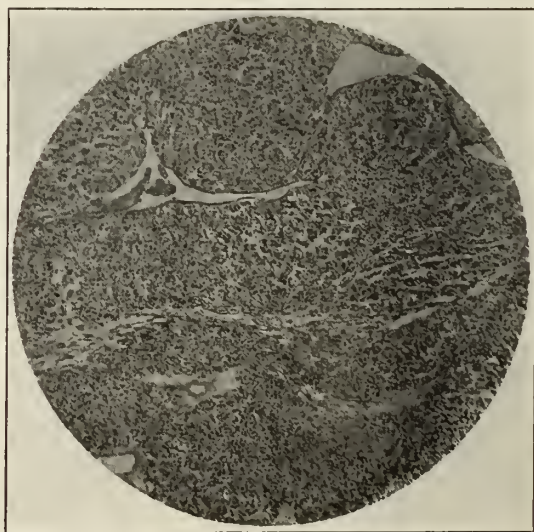


Fig. 8. Typical picture of fetal adenoma. Little stroma and little colloid seen in almost lumenless areas except at center of areas of growth. (Centrifugal.)

seen grossly, except occasionally it is found attenuated and forming a thin covering for the adenomas as a sort of pseudocapsule. These patients oftentimes show glycosuria and albuminuria, seemingly thyroid in origin, which clears up shortly after operation. And in spite of hearts that show rapidity and intermittency of beat, and enlargement with or without murmurs, following the removal of practically all the diseased tissue, these patients "stage a come-back" and soon are able to be fairly active, if that possibility existed prior to operation. Removal of the source of the toxemia, which is the thyroid, seems to eliminate at once the bulk of the poisons and, unlike the patient with Graves' disease, these cases are promptly cured. However, much of our mortality will occur in this type of case if too hastily operated or if the operation requires too much time. But, with few exceptions, these cases of adenomata remain cured after careful operation.

5. *Exophthalmic Goiter of Graves' Disease.* The exophthalmic goiter, as found in Graves' disease, is probably the best type of gland to test the experience and the ability of the surgeon, because it is friable, bleeds easily and often profusely unless handled skillfully. Friability is not so noticeable when these patients are operated very early in the course of the disease, or before any reversion (iodine or spontaneous) has caused them to take on the customary colloid changes.

Some observers ask whether exophthalmic goiter is an entity or whether it is part of a constitutional condition known as Graves' dis-

ease. Some observers have pathological and clinical evidence to show that the typical papillary proliferation seen within the acini, and now recognized as typical for exophthalmic goiter, occurs in colloid goiter, as well as in

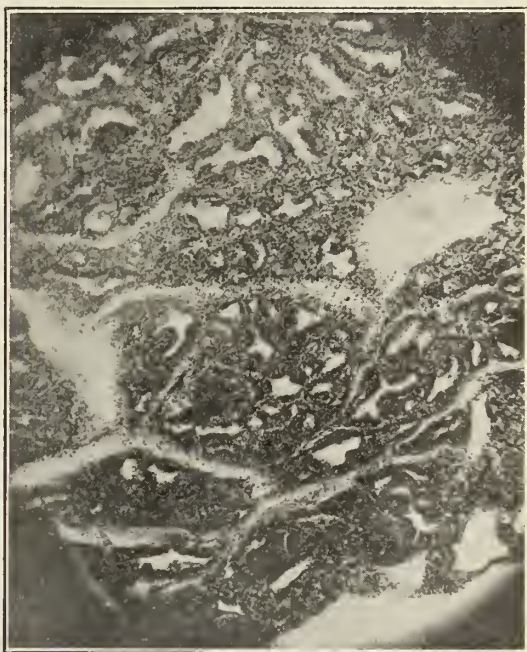


Fig. 10. Typical hyperplasia seen in cases of exophthalmic goiter, or Graves' disease, that have been untreated by iodine. The papillary proliferation is seen extending within the alveoli almost completely filling the lumina where ordinarily colloid is stored.

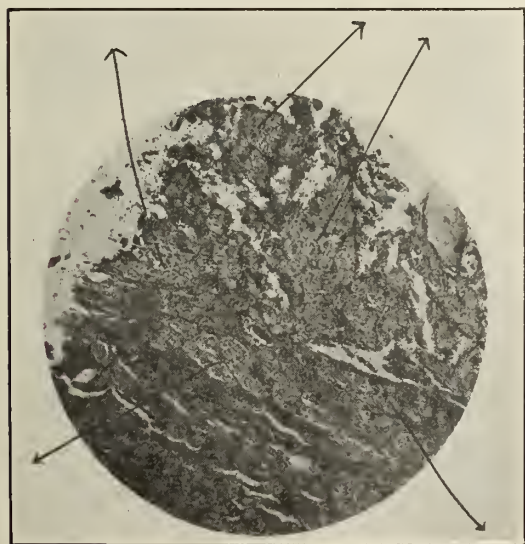


Fig. 9. Part of a goiter with large recent hemorrhage in one area. In the blood mass are seen the various areas of new, rapid alveolar formation following cell proliferation in blood clot.

adenomas and in certain types of malignancy. Greenfield and Ewing believe that exophthalmic goiter of Graves' disease means functional overgrowth; and that while it has stages of development, each stage is peculiar and that taken as a whole the changes are characteristic of this disease. Graham believes that all types of goiter are but pathological evidence of some stage of a conclusive and continuous definite metamorphosis in the thyroid gland.

Clinically, we know that the early cases of Graves' syndrome very often have a history of a nervous heredity, to which has been added a trauma, such as shock, infection, or prolonged bodily or mental strain. We know that it is a self-limiting disease with a tendency toward spontaneous recovery in from six months to three years, more or less.

We know that nonsurgical treatment does not seem to cure and keep cured these symptoms of tachycardia, tremor, nervousness, increased metabolic rate, and an enlarged and often tender thyroid gland, with other associated constitutional changes. We know that in untreated case of Graves' disease, due to

Plummer's excellent work, large but descending doses of soluble iodine offer a wonderful temporary amelioration of symptoms. The symptoms abate sufficiently under proper iodine therapy to allow a patient, who previously would have been a severe risk, to be operated safely. It has also been demonstrated that following operative treatment the convalescence from Graves' disease is less prolonged and less consequential, so far as morbidity to the bodily tissues is concerned, especially to the nervous system, the heart and blood, vascular and renal systems, than from any other known mode of treatment.

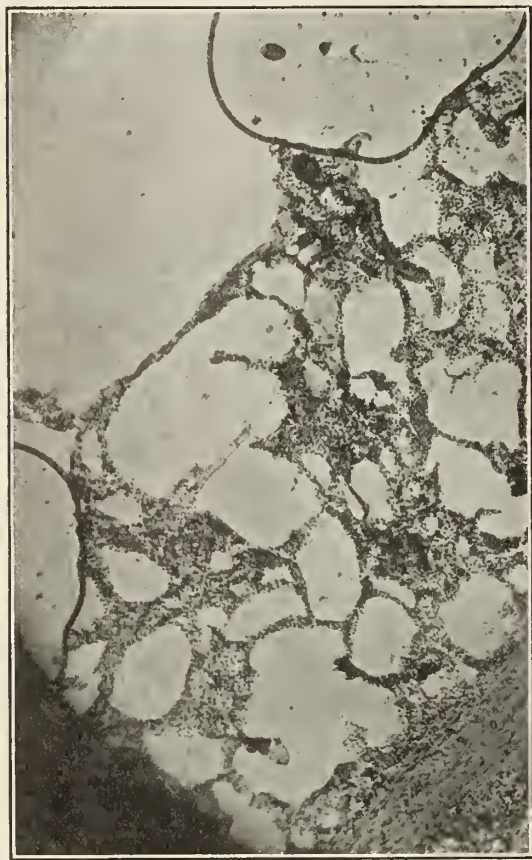


Fig. 11. Regressive changes with cystic formation; and hyperplasia indicating toxemia.

Experience has proven that subtotal thyroidectomy rids the patient of the toxemia and almost at once lessens the severity of the symptoms. In many favorable cases cure is established following operation. In a large percentage of the unfavorable cases, marked improvement is apt to follow surgical interference. Very few properly treated cases die when operated early. One cannot expect brilliant results from patients who have been neglected for months or years, suffering from the

later stages of Graves' disease. Where there has been marked loss of weight, increased catabolism with persistent fever, severe weakness, excitomotor activity, sleeplessness over a long period of time, with eventual low grade starvation acidosis and often associated psychoses and neuroses, the odds are against the patient unless there is a possibility that she can develop from rest, food and certain drugs some cardiac and general bodily reserve strength. Under nonsurgical treatment some cases go through the crisis of spontaneous recovery, but such cases are not cured. They have recrudescences and recurrences; and many of them eventually are operated several times to effect a permanent cure. A few are never permanently cured, but the vast majority are improved or cured; and those that are not cured usually have waited too long for the aseptic scalpel of the surgeon. We know of no surgical condition more amenable to operative interference than the exophthalmic goiter of Graves' disease.

6. *All Previously Operated Goiters That Have Not Been Cured.* One of the unfortunate circumstances attendant on surgery is the necessity of the surgeon's acceptance for operation of neglected cases that have little chance of recovery. This is especially true of thyroid surgery. We fortunately have a low mortality except in cases having had the bodily vitality and cardiac reserve too much abused in combating toxemia over a period of months or years.

Many of these neglected patients are badly used up on admission to the hospital and naturally are not cured following operation, but the necessity for the surgeon's operating at such a time, under such awkward conditions, is not one of choice, but one involving the possible saving of a human life. Beyond that he gives no thought to personal operative statistics nor the belief that he will cure his patient by that operation. Consequently such patients, when they have been snatched from death, should be told upon recovery that they may in the near future be in need of a secondary operation to complete the cure, or perhaps even a third attempt to remove surgically the last bit of the toxic gland. These patients should be returned to their surgeons as soon as their doctor notices that any existing toxemia is not amenable to nonsurgical treatment.

It is wrong to say that surgery has failed to cure these cases of goiter. Surgery has prevented many patients who otherwise would have died, from becoming permanent invalids during the remaining years of their lives. The word cure has a wide range in its ordinary usage among doctors. In early cases, if the risk

of a thyroidectomy at one sitting should be too great, it is good judgment to do a secondary operation at some future time. Deaver says it is better to have two operations for a surgical condition and a live patient, than a too complete operation and a corpse. But it is always well to inform the family ahead of operation when the patient will not be cured, and to explain to them that surgery at some future time, possibly within the next few months or years, may be necessary. Far better that the doctor should send the patient back to the surgeon early for secondary operation than again to delay cure by telling his patient that the first operation was a failure and persist in refusing to have anything more to do with surgery.

In closing, my one hope is to have my colleagues know that when toxic cases are not doing well a surgeon should be consulted. Goiter at this time is essentially a surgical condition just as acute appendicitis is a surgical condition, although we still have some apparently sane men who think they can differentiate between an acute appendix that will perforate and one that will not perforate. It is our belief that the only reason for failure to resort to early operation for a diseased operable thyroid condition is the scar, which nowadays amounts to nothing and constitutes no real objection.

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DISCUSSION

DR. E. V. MASTIN, St. Louis: I have enjoyed these papers very much and there is little left to be said. However, there are a few points I would like to touch upon. First, colloid goiter. This is in no sense a surgical condition and it should be given adequate opportunity to subside under medical treatment, which consists of thyroid extract and iodine. However, some do not subside and in these cases surgery should be resorted to.

The adenomatous goiter is the most common type of goiter and there is only a small percentage that becomes toxic in individuals less than thirty years old. However, about sixty per cent. is toxic in individuals past fifty-five. The size of the adenoma has nothing to do with the degree of toxicity. I am inclined to believe all adenomatous goiters occurring in individuals past thirty should be removed.

The exophthalmic goiter is certainly the most common type seen clinically and there is no one type of treatment that is satisfactory for all cases. However, surgery offers the best possible chance for cure. Most exophthalmic goiters require preliminary treatment and this consists of rest in bed, forced fluids, a high caloric diet, ice bags to precardium and Lugol's solution.

I would like to stress a few points about the administration of iodine in exophthalmic goiter. The ordinary dose generally averages about ten to fifteen drops three times a day. Some cases do well on that but there are others in which it should be increased to twenty or twenty-five drops. In the severe crises and in the impending crises we should give much larger doses than at other times. I have given one hundred drops in the first two or three

hours. It is also indicated just prior to operation and after operation. I think a great many of the cases of postoperative hyperthyroidism are minimized by large doses of iodine being given. Small doses should be given over a period of two or three months after operation.

There are some cases that do not respond to Lugol's solution. It is in these cases that ligations are particularly indicated. I am inclined to believe that the benefit derived from ligations is not due to interference with the blood supply, but is due to the severance of the branch of the superior sympathetic nerve which controls the secretory mechanism of the thyroid gland.



Fig. 12. Reversion from papillary proliferative type to that of colloid with adenomatous hyperplasia. Lymphoid proliferation seen as round cell infiltrate in fibrous tissue. (Strumitis.)

It is better to give a combined anesthetic, that is, a local anesthesia, combined with as little gas oxygen or ethylene as is necessary to satisfy the individual patient.

A word about the amount of tissue that should be removed. This all depends upon the judgment of the operator and it is probably best to make a double resection with removal of the isthmus, preserving gland tissue equivalent to between one half and one third of a normal lobe, preserving the posterior capsule of the gland so that the parathyroids will be spared and injury to the recurrent nerve will be minimized.

Finally, I would like to emphasize the importance of advising patients to seek surgical aid early, before

the goiter has become toxic and before irreparable visceral degenerative changes have occurred.

DR. HUDSON TALBOTT, St. Louis: I wish to voice my appreciation of the papers to which we have just listened, and my regret that I did not get to hear Dr. Bartlett.

The goiter, of course, is occupying our attention today as never before and it would seem almost trite to bring before this group of people the goiter subject, and yet we are indebted to those who have discussed it this evening. This group needs, perhaps, to have their attention called to the goiter, but we have a liability as missionaries to our societies when we go back to them, we have a duty to perform, for we are constantly having brought to us cases grossly neglected, perhaps by their home physicians, perhaps not; perhaps it is due to the fact that we are still far from a definite well-known method of decision as to what goiter is surgical and what is medical, and just when the line is crossed. But certainly it is receiving much more attention than ever before. There are many cases being treated as neurotic cases that are goiter cases, and we should more than ever calculate and measure the metabolic rate of our patients. That should be carried back to the different societies.

The pictures, those large tumors, are of cases comparatively easy in decision as to what the method of treatment should be. But we do find there are many cases, even toxic cases, with little or no enlargement of the thyroid, and oftentimes we see cases that are really hopeless that have burned themselves out and are so toxic as to be beyond hope of repair, that even surgery cannot reach. I have recently seen such a case, with never any enlargement of the thyroid gland or history of any enlargement, and definitely a toxic thyroid case. They should be treated and watched carefully and are medical cases, and even sometimes, when they have surgical aspects they have avoided the operation by careful treatment. I should like to emphasize the necessity of absolute rest in such cases. If the patient is put to bed and given complete and absolute rest just as phthisiologists are doing in lung cases, those surgical symptoms will oftentimes subside and your patient will remain well.

Just one word about the extreme surgical case in which our mortality mounts. I think that we sometimes are prone to let the patient's financial condition get in the way of his recovery, and we hasten our work when we should be more patient. Briefly I should like to give you a little recitation of a case I had a little while back.

A young fellow whose progress I had noticed, not as a patient, but as a friend and often advised him. He had had treatment from this doctor and from that doctor, and was doing everything he thought to recover, to restore himself. One day he sent for me. He was so nervous he couldn't sit down. I did what I could. That patient was placed in the hospital with routine treatment for six weeks before we even dared to ligate one artery, and we held him four weeks until we ligated the other. A splendid medical man directed the treatment. It was another four weeks before we could remove one lobe and another four weeks before we could remove the other, all done under local anesthetic. But after seven months treatment, medically and surgically he left the hospital and for three or four years has been doing a man's full duty. There was youth on his side, and the possibility of a comeback of his heart muscle that in an older patient would have been impossible. Time is an important thing and haste is dangerous.

PAINFUL HEEL AND METATARSAL NEURALGIA

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In 1923 I presented a short contribution on inflammation of the deep plantar bursae.¹ Since the publication of that paper some of my friends have complained that they failed to get results from the operation therein described. Since that time I failed to secure results after two operations in one patient and in another a third attempt was required before complete cure was obtained. This experience has shown me that one may err in his judgment as to the bursa involved, or there may be several bursae simultaneously affected and the removal of one cause will not produce complete relief. For this reason I want to call attention to several other bursae, the involvement of which may be mistaken for involvement of the plantar bursa or, what is of more importance, may be simultaneously involved.

As stated in my previous paper, the plantar bursae are most commonly involved to the degree that operation is required. Instead of there being a single bursa there may be several involved. When separated, one may distinguish those about the short flexor, the tibialis anterior or the abductor hallucis. I was unfortunate in using the term "calcaneal" to describe these bursae. These should be termed the anterior calcaneal and those over the tuberosities of the os calcis should be called the posterior calcaneal bursae. Diagnosis may not be exact enough to single out a particular bursa and it is often wise to curette all of them. The bursae over the malleoli and those under the circinate ligament, about the extensor or peroneal tendons, are sometimes involved but seldom require operative treatment since they usually respond to milder measures.

Painful Heel. The bursa most likely to be mistaken for the anterior calcaneal bursa (described in my previous paper) or associated with them, is the posterior calcaneal bursa producing the so called painful heel. This bursa is the largest of the bursae of the foot and is situated on that part of the os calcis which presents its bearing surface to a horizontal plane. In cases where the pain is diffuse it may be difficult to locate the painful point. Sometimes the patient will be able to locate the exact point with the tip of his finger when the surgeon's manipulations about any region of the heel are complained of. But usually a firm gradually increasing pressure with the tip of the surgeon's finger will locate the exact point. The more acute the inflammation the more difficult

1. J. A. M. A., Vol. 81, July 7, 1923.

is it to locate the painful point. Like any acute bursitis the pain may at first be distributed over a wide area,—all over the foot and as high as the thigh. There may even be evidence of local reaction. A few days rest may so reduce the pain that exact localization becomes possible.

Once the diagnosis is made the treatment is simple. The lower surface of the os calcis is exposed by a medial incision and the base of the bone vigorously curetted. The wound should be lightly packed with gauze for a few days.

In case of doubt as to which bursa is involved both the calcaneal and the plantar bursae should be curetted.

Metatarsal neuralgia (Morton's disease). Though the bursae at the metatarsophalangeal region are seldom mistaken for inflammation of those about the heel, a brief mention of them may be made at this time. It is hardly necessary to mention that the term "neuralgia of the bone" should go into retirement along with "neuralgia of the stomach." The theory of pressure on nerves advanced by Morton never had any facts to substantiate it. It is just another example of a theory arrived at by exclusion.

We have in the region of the metatarsophalangeal articulation three sets of bursae: (a) the intertarsophalangeal, the largest and those usually involved; (b) the bursae below the heads of the metatarsal bones; and (c) those about the tendons in this region. Unfortunately, cures have been obtained by the resection of nerves in this region and resection of a metatarsal head. Either of these procedures obliterates the offending bursa and hence secures a cure. However, if the bursae are obliterated a cure is obtained without molesting either nerve or bone. It is interesting to note that despite the neural theory of origin of the pain many writers have noted that evidence of local reaction sometimes was present early in the course of the disease and that tight bandaging gave relief, just as a bandage about the wrist relieves the tenosynovitis of the wrist in young tennis players. No one speaks of this wrist trouble as a neuralgia of the median nerve. These bursae can be obliterated either by incision on the plantar or the dorsal surface. All the bursae in the painful area should be curetted because it is not possible to diagnose with certainty just which bursa is at fault. It should also be noted that the bursitides in this region are more frequently manageable by orthopedic means because it is possible by bandaging the foot and by properly fitted shoes to eliminate the friction of the bursal surfaces.

In the light of my experiences with bursal inflammations of the feet I am disposed to

question categorically the explanations of many of the factors as to the nature and origin of the disability associated with the so called flat feet. I believe it is possible to separate clinically the localized bursitides from the more general disability resulting from overstraining of multiple structures of the foot. Most certainly, destruction of the bursae brings complete relief to patients who are not relieved by orthopedic means.

Halstead, Kansas.

STRONGYLOIDES INTESTINALIS INFECTION

CASE REPORT ON COCHIN CHINA DIARRHEA IN
A MISSOURIAN

M. PINSON NEAL, M.D.

Professor of Pathology

AND

HUGH P. MUIR, M.D.

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COLUMBIA

The nematode *strongyloides intestinalis*, Bavay,² Grassi,³ was first seen in 1876 by Normand,¹ a French navy medical officer, in the feces of men who had returned to Toulon after contracting severe diarrhea in Cochin China. Because of the geographical source of the first known infections the disease has been termed Cochin China diarrhea. In 1876 Bavay described the parasite in detail. The organism later was found in Italy and it was frequently seen at the building of the St. Gothard tunnel. R. P. Strong was the first to discover it in the United States. His case, reported with two others by Thayer,⁹ was the first seen in this country. Two of Thayer's three cases were unquestionably infected in either Maryland or Virginia. Other cases have been observed in Belgium, Holland, Sicily, the Dutch Indies, Egypt, Germany, Spain, the Philippine Islands, Martinique, Yucatan, Panama, Brazil and other South American countries.

While this type of diarrhea is commonly seen in Cochin China, it is one of rarity in North America if the case reports and literature may be taken as an index. Osler⁴ stated that from his clinic three cases had been reported. Stengel and Fox⁵ in 1921 stated that the parasite had been recently discovered in the United States and Cummer⁶ as recent as 1926 said that cases had been reported in this country. Neither Strumpell⁷ nor MacCallum⁸ mention the disease or the parasite.

MORPHOLOGY AND PATHOGENICITY

The parasite, which has been variously de-

scribed as *Anguillula stercoralis*, *Rhabdonema intestinalis*, *Strongyloides stercoralis* and *Leptodera intestinalis* is a common parasite in tropical diarrhea, particularly in Cochin China, and is occasionally met with in temperate regions. It has been found⁴ in 3 per cent. of the medical patients in the Isthmus of Panama, and in from 20 to 30 per cent. of the patients in the insane division. The mother worm, a small filiform parasite from 1 to 2 mm. long, is found in enormous numbers burrowed in the mucous membrane of the upper part of the small intestines, in the biliary and pancreatic ducts of infected man. The ova, which are given off, hatch in the feces, and the young rhabditiform larvae pass out in mucous with the feces. From contaminated soil they may be deposited on the skin which they penetrate, and then find their way like the *Ankylostoma duodenale* to the intestinal wall where they localize themselves, or they may gain entrance through the digestive tract in water or on raw vegetables. A case was recently reported¹¹ from Yucatan in which the larvae were found in chronic inflammatory lesions in the leg of a boy.

For full details on the morphology and life of the parasite the reader may refer to the articles by Thayer⁹ and by Price.¹⁰

SYMPTOMS

Chronic diarrhea of Cochin China, in which bloody stools and tenesmus do not occur, must not be confounded with chronic dysentery.¹² When the parasites are in large numbers they cause diarrhea and a mild anemia. The general symptoms are those of a chronic diarrhea, with repeated periods of remission, and intestinal indigestion for certain articles of food. Indigestible types of food, such as corn, heavily fibered vegetables, fruits, berries, etc., increase the diarrhea. Reflex gastric disturbances, as gastric discomfort, eructations, nausea and vomiting, have been encountered.

DIAGNOSIS

The recognition of the disease depends upon the examination of feces. In the case herewith reported the parasite was not found until the eighth careful examination of the feces with the adherent and admixed mucous. We had difficulty in finding the parasite in our early searches which were made on fluid stools. Later, using formed stools, they were readily found when the mucous, particularly that in the fissures, was examined. The clinical features of repeated remissions, with absence of fever, tenesmus, bloody stools, and hyperleucocytosis associated with chronic dysentery

should be suggestive. Incontinence of feces is said to be extremely characteristic.

REPORT OF CASE

Reverend A. A. P., aged 44, white, male, married, came under observation November 8, 1925, complaining of diarrhea of 18 years duration.

Personal history. The patient has never been out of the United States. He has had measles, mumps, pertussis, varicella, scarlet fever, tonsillitis, malaria, influenza and "lung fever." During the period 1889-1891 he worked among foreigners of several nationalities in a West Virginia coal mine, and from 1902-1905 taught and lived intimately with a group of Chinese students at Drake University, Des Moines, Iowa. The first attack of diarrhea, which lasted one month, was in May, 1908. December 26, 1908, following a clinical diagnosis of cancer of the pylorus, an exploratory laparotomy was performed. At this time the appendix was removed and a Lane's kink freed. Following this the diarrhea became more pronounced with the gross appearance of mucous and blood in the stools. Since that time diarrhea of moderate intensity has alternated with constipation which is often associated with "bilious attacks." During periods of constipation, pain in the left and right hypochondriac regions is present for hours previous to defecation. Occasionally nausea and vomiting accompany the pain. The diarrhea is always most marked in warm weather and following ingestion of cabbage in any form, turnips, corn and fruits, except strawberries when eaten in small amounts. His food now consists largely of milk, buttermilk and meats. At times weakness has compelled him to take to bed for weeks. Up to 1908 patient's average weight was 121 pounds; at one time had weighed 133 but since the onset of the diarrhea has weighed regularly around 100. This patient has been treated, without search for intestinal parasites or their ova, by various physicians for chronic diarrhea, mucous colitis, indigestion, constipation, neurasthenia and cancer of the pylorus.

Physical examination. The patient, a small underdeveloped, only moderately well nourished, desiccated appearing man, weighed 106 pounds. There was marked pyorrhea alveolaris. In the left and right hypochondriac regions and over the cecum there was tenderness with pain on deep pressure. Proctoscopic examination was not permitted. Findings in other organs were of no consequence or had no bearing on the disease.

Laboratory examinations. The urine has consistently shown nothing abnormal. Gastric analysis following the test breakfast gave normal findings.

Blood examination when patient was first seen gave: Erythrocytes, 5,232,000. Hemoglobin, 80 per cent. (Dare.). Color Index, 0.8. Leucocytes, 11,300.

Differential (500 cells):	Per cent.
Neutrophils	60.1
Eosinophils	3.5
Basophils	0.6
Lymphocytes	30.7
Large Mononuclears	5.1

Nucleated, stipple and crenated red cells, poikilocytosis and polychromatophilia were absent. A few microcytes were present. Two other blood examinations made later gave approximately the same findings.

Feces. Twenty specimens, following thymol, saline purgation and natural movements, have been examined. Some of them were fluid, some semi-solid and others formed masses. Mucous, leucocytes, desquamated epithelium and fibrin were found in all. In six a few characteristic rhabditiform embryos of *Strongyloides intestinalis* were found

Only chemical traces of blood were present in a few. Ova were not seen. Eight specimens were examined on consecutive days before the parasite, which we have most consistently found in the mucous on the surface and in the fissures of formed stools, was discovered.

Treatment. All articles emphasize the difficulty encountered in treating this condition. In this case *spiritus etheris compositus* (Hoffmann's anodyne) is being given at short intervals through a duodenal tube and followed by a purgative with the belief that such repeated treatments will eliminate the adult parasites. Thymol was tried but found ineffective.

SUMMARY AND CONCLUSIONS

1. Diarrhea associated with the presence of *Strongyloides intestinalis* has been found in Missouri.

2. Of especial importance is the question regarding the source of the parasite. The infection probably was acquired during the close association with Chinese students three years previous to the first manifestation of diarrhea.

3. The parasite, which is a harmful one to man, may exist in the intestine for months or years without ill effects.

4. Eosinophilia, considered as one of the clinical indices to most of the parasitic infections, was absent in this case.

5. This nematode, being infectious through the skin from contaminated soil and through the digestive system from food and drink, adds another to the long list of reasons for proper disposal of excreta.

6. Examinations of feces should be more regularly and thoroughly done than is now the custom.

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TRANSFUSION IN THE TREATMENT OF ANEMIA*

W. W. DUKE, M.D.

KANSAS CITY, MO

Practically every case of anemia can be benefited by transfusion, that is, so far as the anemia is concerned. The secondary anemias can be immediately and completely cured if the cause can be removed. In pernicious anemia and the leukemias we have an unknown factor, namely, the nature of the disease primarily responsible for the anemia. The cause in these three illnesses cannot be removed and the anemia is likely to recur. In the more favorable cases, the anemia recurs in from one to several years. In the less favorable cases it may recur in six months or less. For this reason transfusion has to be repeated in these types of illnesses. The patients, however, are greatly benefited and as a rule can be kept on their feet instead of in bed. This condition can be maintained until some complication of the disease arises.

DIAGNOSIS OF ANEMIA

We have several very accurate methods of diagnosing anemia. It can be diagnosed from examination of blood smears and from estimation of the number of red cells and hemoglobin per cent. of the blood. A more accurate estimation of the quantity of blood which a person may have, or rather, the quantity of hemoglobin in circulation can be made by examination of the palm of the hand. Other skin surfaces cannot be used for the estimation of color since the color of the face, lips, nails, and other surfaces vary with heat, cold, exercise, emotional disturbances, and other factors. The palm of the hand takes very little part in the regulation of body temperature. It also is not influenced by the emotions and very little by heat, cold, or exercise. Furthermore, the palm of the hand of a normal individual can be compared with the palm of the patient and very slight differences in color can be noted. Several points in technique must be observed. *First*, we must know that the color of the palm of the physician is normal. This can be determined by comparing the palm with a number of young healthy individuals. *Second*, the palm of the hand of the physician must be exactly the same distance below the base of the heart as is the patient's below the base of his heart when the estimation is made. The hand should be semi-flexed and allowed to remain in this position for a few moments. It can then be compared with the patient's and very slight grades of

*Read before the Kansas City Academy of Medicine, January 22, 1926.

anemia can be discovered. By long experience with the use of this method I have become able to predict with remarkable accuracy just how much blood must be given by transfusion in order to reestablish normal color. The advantage of this method is that it is at the disposal of every physician and the estimation can be made in a few methods.

A few words may be said concerning methods of giving transfusion. Two methods I think stand out pre-eminently—first, the Lindemann syringe cannula method in which whole blood is transfused from donor to patient by means of cannulas which are inserted in the arm veins and several record syringes. The advantage of this method is that the blood is not mixed with extraneous substances and is out of the body on an average of only six seconds. For this reason, the blood does not have time to become toxic and if technique is perfect, reactions due to transfusion are practically nil. Among seven hundred cases I have had only three severe reactions and no deaths.

A second method which is possibly more adapted for use in the case of physicians who are not experienced with the Lindemann method is based upon mixing the blood with citrate solution in a glass vessel. The citrate prevents coagulation and citrated blood can be transferred to the patient with ease. Reactions are more common with this method and it is admittedly not so perfect as the Lindemann method. Furthermore, huge volumes of blood cannot be given with this method without severe reaction.

INDICATIONS FOR TRANSFUSION

A word may be said concerning the indications for transfusion. Personally, I feel that the indications for transfusion are exactly the same as the indications for the use of Bland's pills. It is far superior to Bland's pills for several reasons: *First*, the results of transfusion are certain. The results of the use of Bland's pills are uncertain. Sometimes it relieves and sometimes it does not. *Second*, the results of transfusion are immediate. Relief of anemia through the use of Bland's pills requires time. *Third*, the relief of anemia by transfusion is complete. The result of the use of Bland's pill may be incomplete—that is, the anemia may be only partly relieved. *Fourth*, the effect of transfusion is harmless. Bland's pill may cause constipation. Both seem to me to be equally harmless.

TRANSFUSION IN THE DIFFERENT TYPES OF ANEMIA

Transfusion is especially useful in treatment of acute hemorrhage. In this the cure is

immediate, complete, and permanent if the source of the hemorrhage is removed. It is very useful in the treatment of hemorrhagic diathesis, especially if it is complicated by anemia. In several types, such as purpura hemorrhagica, melena neonatorum, chloroform poisoning, phosphorus poisoning, acute yellow atrophy, the hemorrhage is stopped by transfusion. It is very useful in the treatment of anemia due to chronic ulcer. Chronic ulcers do not tend to heal in anemic patients. If adequate blood volume is reestablished completely by blood transfusion, hemorrhage from an ulcer usually ceases and the ulcer heals. It is very useful in treating chronic sepsis, such as osteomyelitis, septicemia, and other kinds of sepsis when complicated with anemia. A patient with sepsis has a very poor chance for recovery if in addition to sepsis he is handicapped by anemia. Transfusion is very useful in this condition. It is useful in the treatment of tuberculosis complicated with anemia. A person with tuberculosis has a poor chance for recovery if he is anemic. Complete relief of the anemia gives him a better chance. It is useful in the treatment of debilitated individuals who are slightly anemic, especially in women who lose too much blood by menstruation and are debilitated on this account. It is useful in the treatment of anemic individuals preparatory to operation. It is a specific in the treatment of chlorosis. In my experience, every case of this disease which, by the way, is rather rare in this district, has been completely, immediately, and permanently cured by transfusion. It is less useful in the cure of aplastic anemia, pernicious anemia, and the two leukemias than in the diseases previously mentioned because of the fact that the etiological factor cannot be removed. However, by consistently treating these diseases by transfusion as they become anemic, patients can spend several additional years on their feet instead of flat in bed with a nurse.

SIZE OF TRANSFUSION

Finally, a word should be said concerning the volume of blood which should be introduced. There is no point of giving a transfusion unless you give a sufficient amount of blood to help the patient. Small transfusions, in my experience, have given imperfect and rather unsatisfactory results. If one does a job he may as well do it well and if you wish to reestablish blood volume you may as well do it perfectly as imperfectly. If the introduction of a pint of blood in a patient who needs three quarts will do a little good, certainly three quarts should do more good. This has been true in every patient whom I have transfused with one exception, namely, in patients with

pernicious anemia. In this condition the blood vascular system is atrophic and the capillaries and small vessels cannot stand a normal blood volume. In this condition it is better to leave the patient slightly anemic with a red count between three and four million and the hands slightly paler than normal. They get along better than patients in whom the full blood volume has been restored.

CONTRA-INDICATIONS

I formerly believed that a number of things contra-indicated transfusion, such as nephritis, cardiac disease, and hemorrhage. However, I have changed my mind concerning this after experience with seven hundred transfusions and have decided that the only contra-indication to transfusion which I know of is brain hemorrhage and allergy.

Federal Reserve Bank Bldg.

THE ROSE BENGAL TEST FOR LIVER FUNCTION

William J. Kerr, G. D. Delprat, N. N. Epstein and Max Dunievitz, San Francisco (*Journal A. M. A.*, Sept. 26, 1925), regard rose bengal as a dye that has advantages over other dyes, so far studied, in estimating the gross functional capacity of the liver. A vein in the cubital fossa is selected and a sample of blood is withdrawn with a syringe and discharged into a graduated centrifuge tube containing 2 c.c. of a 2 per cent. solution of potassium oxalate. Without the needle being removed from the vein, either 100 or 150 mg. of the dye, in a sterile 1 per cent. physiologic sodium chlorid solution, is injected and the needle washed out by a further injection of 5 or 10 c.c. of the salt solution. The needle is left in the vein, and at exactly two minutes after the injection of the dye a sample of blood (10 c.c.) is withdrawn from the needle, still in situ, into a fresh syringe, and discharged into another graduated centrifuge tube containing 2 c.c. of oxalate solution. The needle is again washed by injecting 5 or 10 c.c. of physiologic sodium chlorid solution, which maneuver prevents the clotting of blood in the needle. At four and eight minutes, respectively, from the time of injection samples of blood are withdrawn and collected in an identical manner. The needle is then withdrawn from the vein in the arm, and the patient is told to remain in the darkened room for an hour. As soon as possible after collection, the blood samples are centrifugalized at a speed of 2,000 revolutions per minute for thirty minutes. The percentage of cells and plasma in each tube is then carefully noted. From the samples of blood taken at two, four and eight minutes, respectively, after the time of injection, 3 c.c. of plasma is then diluted in separate tubes with an equal volume of physiologic sodium chlorid solution, and the color of the dye in these solutions is compared in a Helling colorimeter, with a standard solution containing 5 c.c. of plasma from the "control tube"; that is, the same amount of blood withdrawn from the vein before the injection of the dye, and 5 c.c. of a 0.0075 per cent. solution of rose bengal. Having obtained the concentration of the dye in the blood sample withdrawn two minutes after the injection of the dye and knowing the total amount

of the dye injected into the circulation, it is a matter of simple proportion to calculate the blood volume of the person. In a group of fifty-seven cases of cirrhosis, ascites, carcinoma of liver and bile passages, cholecystitis, nephritis, jaundice and congestive heart failure, the rate of elimination of rose bengal from the blood stream has been used as a test for liver function. The dye is eliminated almost entirely from the blood stream through the liver in a comparatively short period of time. It is harmless to the subject in a dose of from 100 to 150 mg. The results in individual cases have been reduced to an arbitrary blood-volume standard for purposes of comparison. The results in this small group of cases indicate that rose bengal is the most satisfactory dye for the estimation of liver permeability, which may give a test for gross liver function analogous to the phenolsulphonephthalein test for gross kidney function. The dye fulfills the following requirements: (a) it is nontoxic in the amounts necessary for the test; (b) it is a crystalloid; (c) it is eliminated through the liver; (d) it remains in the circulation for a sufficient length of time to allow determinations of the dye in the plasma to be made. Patients with definite cirrhosis or other extensive liver disease show a marked retention of the dye in the circulating blood. Obstruction of the biliary passages causes a retention of the dye, but in such cases there are other clinical evidences of obstruction of the biliary passages. In all other cases studied, the curves are within normal limits. The test may be of great value when jaundice and ascites are presenting symptoms. These observations suggest that there are some reciprocal functions of the liver and the kidneys.

LIVER FUNCTION TESTS

A comparative study was made by Samuel S. Berger, Milton B. Cohen and J. J. Selman, Cleveland (*Journal A. M. A.*, April 10, 1926), of five liver function tests in 100 clinical cases: the Van den Bergh test; the Widal test; Roesenthal's test; the examination of urine for urobilin and urobilinogen and the Hay test for the determination of bile salts in the urine. These tests represent different functions of the liver. Any one or more or all of these functions may become impaired. Again, one or more of these functions may escape injury. Therefore the various tests do not give parallel results. When the authors attempted to separate clinical cases into groups of liver disease or no liver disease by means of any one of these tests, unsupported by other clinical evidence, they were unable to do so. When all the tests were positive, they were dealing with liver disease, clinically of the most severe type; namely, toxic jaundice. When all tests were positive except one, namely, four positive and one negative, clinical liver disease was present, usually of a chronic type, such as that seen in Banti's disease or pernicious anemia and cirrhoses. In every case in which all the tests were positive except the Widal, there was obstructive jaundice due to tumor. When only three tests were positive it was impossible to correlate the findings with the clinical picture, as there were many cases in which liver disease was suspected which did not give positive reactions to more than one or two tests and, conversely, there were many cases in which liver disease was unsuspected which gave as many positive results. At present they are of use chiefly in the differential diagnosis and in following the progress of a given case. The greatest amount of information can be gained by doing all the tests simultaneously and repeating them often.

THE JOURNAL

OF THE

Missouri State Medical Association

OCTOBER, 1926

EDITORIALS

ANOTHER MEDICAL DIPLOMA MILL?

Recent dispatches from Kansas City tell of the incorporation of a new medical school in that city as the American Medical University. We are informed that the institution is operating in the same building formerly occupied by the Kansas City College of Medicine and Surgery, diploma mill, whose charter was revoked by the Supreme Court last June. Some of the incorporators of the new school are recent graduates of the defunct institution.

Apparently no time was lost by the promoters of the American Medical University in starting what appears to be another low grade medical school in Missouri, using the debris of the discredited and defunct institution as a base of operations. The charter of the Kansas City College of Medicine and Surgery was revoked June 23, 1926, the charter of the American Medical University was issued July 29, and the school was opened for business August 9. The charter for the new institution was issued under the law governing business corporations so that the school cannot claim tax exemption as an educational institution. In other words, it is frankly a corporation for profit.

It is understood that the school will teach medicine under the obsolete eclectic system, doubtless with a view of having its graduates take examinations before the Arkansas eclectic board which has in the past been an open sesame to medical licensure. No information seems obtainable concerning the equipment of the American Medical University or its facilities for teaching even eclectic medicine, but an item in the *Kansas City Journal* of August 23 declares that the new school has purchased the equipment of the Kansas City College of Medicine and Surgery and holds a lease on the building. This lease is owned by the Eclectic Building Company and, according to the newspaper statement, Dr. Date R. Alexander, secretary of ousted medical school, is secretary of the building committee. According to the information published, the school claims nineteen students already enrolled, but gives no hint as to who constitutes the teaching staff.

The officers of the new school are given as

Dr. F. E. Johnson, president, Dr. J. L. Glines, secretary, and M. L. King, treasurer. According to the records of the Council on Medical Education, Johnson was "graduated" by the defunct school in 1921 and licensed by the Arkansas Eclectic Board in 1921 and by the Kansas board, through reciprocity with Arkansas in 1923.

The record of John R. Glines shows that he presented a sworn affidavit to the Connecticut Eclectic Board but made no claim regarding his attendance at the Kansas City College of Medicine and Surgery, merely declaring that he was granted a diploma May 2, 1921. His name, however, does not appear among the lists of students of the institution for the sessions of 1915-16, 1916-17, 1917-18, 1918-19. In the school announcements for 1920-21 and later years no lists of students were published. It appears that Glines failed at the examination held by the Connecticut Board of Medical Examiners in July, 1922.

The ease and facility with which articles of incorporation for teaching medicine are given to persons who have no standing in the medical profession is shocking to reputable medicine, but we are apparently without remedy. Date R. Alexander's connection with the "building committee" seems to indicate that he is not without influence in the conduct of the new medical school.

An investigation of this new medical school by the state officials might safeguard the welfare of the people.

THE EYE RESEARCH BUREAU

The Wintersteiner collection of about 12,000 slides from ocular tissues for microscopic study has been described before in these pages. It will be remembered that through the generosity of Mr. Chas. Rebstock, a director of the Missouri Association for the Blind, this collection was secured. Dr. Hugo Wintersteiner was a distinguished ophthalmologist and ocular pathologist of Vienna. This collection is housed at the St. Louis University Medical School and is open to the examination and study of any and all physicians. There is no better collection of microscopic specimens of eye material in this country than the Wintersteiner.

The importance of pathology in the practice of medicine cannot be overstressed. It is well known that the best textbooks in the different branches of medicine have been written by pathologists in those departments. Pathology has been looked upon too much as an abstract laboratory science. The truth is that it is emi-

nently practical for accurate diagnosis, prognosis and treatment. It cannot be disputed that an ophthalmologist is a better practitioner for having a good working knowledge of eye pathology.

The Eye Research Bureau also includes a laboratory in operation for the sectioning and staining of ocular tissue. To excise tissue and throw it away would seem to indicate a lack of interest in the diagnosis of the case. Unfortunately much valuable material is thus lost. A microscopic examination of this tissue would accurately fix the diagnosis and certainly aid in the handling of the next similar case. Naked eye examination or that with the ordinary magnifying loupes does give some idea of the tissue changes but only cellular study through the microscope reveals the diagnosis. Is it not worth while to know whether or not a sympathetic uveitis is present in an eye enucleated because of a perforating injury? If one is able to assure the patient that he will not later have a sympathetic uveitis of his remaining good eye which, as is well known, can occur years after the removal of the injured eye, is that not worth the trouble of having the eyeball placed in plenty of 10 per cent. formalin and sending it on to this eye laboratory? The general laboratories are not equipped to section eyeballs nor will their directors deny their inability to diagnose changes in the eyeball. Eye pathology is just as much a special study as is ophthalmology. Many interesting conditions have been found in this laboratory and reported in the eye journals. The laboratory stands ready to section half of the eyeball, sending the other half back, to send back prepared sections from half or from the entire eyeball or to send back a detailed report of the findings with representative prepared sections. Such detailed pathological report can be incorporated into a paper for publication where the clinical history or microscopic findings warrant it. Ocular tissue includes that from the eyeball, eyelids and orbit as well as eyeballs.

The Eye Research Bureau is maintained conjointly by the Missouri Association for the Blind and the St. Louis University School of Medicine. Communications to it should be addressed to Mrs. A. F. Harris, secretary, Missouri Association for the Blind, 331 Metropolitan Building, Saint Louis.

VALENTINO

The death of this young man seems to have been such an unnecessary and easily preventable occurrence that a closer scrutiny of the events that led up to his death seems advisable. According to newspaper reports, he

had abdominal distress for six weeks preceding the fatal attack during which he took tablets of some kind and did not consult a physician. He collapsed suddenly and was taken to a hospital and there it was discovered that he had a perforated appendix. It is almost impossible to doubt that he would be alive today if an early diagnosis had been made, in other words if he had consulted a physician during his attacks of abdominal distress.

Does not the general public know that a persistent abdominal cramp is a sign of probable great danger? Is there a large body of our population that must die because of lack of medical advice, when that advice may easily be had? The realization that such complete ignorance of modern medical science exists among otherwise intelligent people, is sad to contemplate. It is the duty of every physician to teach his patients the necessity of early medical advice in every case of abdominal distress which lasts longer than twelve hours. Appendicitis is an insidious disease which is often manifested by vague and indefinite symptoms entirely remote from the immediate vicinity of the appendix, and if we are to successfully combat its too often fatal progress, the layman must be warned of the possible dangerous involvement.

Physicians give a lot of advice free of charge and do it gladly. Conversations on the subject of health preservation are common and if a physician happens to be present his views are eagerly sought and respected. Teach the public to seek the advice of a physician in every case of prolonged abdominal pain, and thus save thousands from a fate similar to that of Valentino.

THE MISSOURI PENSION FOR THE BLIND

There are probably few physicians in Missouri who do not know about the pension for the blind now administered in this state. The eye physicians of course have been making the necessary ocular examinations of applicants for pensions and therefore know intimately of its workings. In addition, many general physicians have come into contact with the system through the occasional examination of a blind applicant or through reporting a possible candidate met with in their practice.

It was recently announced in the newspapers that no more money would be available this year to pay on pensions for the blind. In several editorials the papers commented favorably on the desirability of such relief and deplored the financial shortage preventing further payment.

The pension for the blind in Missouri was brought to the attention of the public largely if not entirely through the efforts of the blind themselves. Blind individuals feel that no one understands the needs of the blind as they do. They are the ones then who "put over" the pension for the blind in this state.

An amendment to the state constitution authorizing the legislature to levy a tax of from one to three cents on every \$100 of private property for relief to the blind, received the required two-thirds consent of the voters at the presidential election of 1920. Thus the people have definitely consented to furnish such relief; it was not a matter of the legislature passing it but of the people themselves ordering it. The Missouri pension for the blind is therefore a matter of considerable stability and permanence.

The General Assembly of 1921 fixed a two cents levy on the \$100 property valuation and \$75 quarterly for the amount of the pension. For this relief there was included all individuals 21 years of age and over, who had lived continuously in the state for 10 years or who had lost their sight while living in the state, who had an income from all sources no greater than \$780 a year and whose vision with or without glasses was 20/450 or less in both eyes. The Missouri Commission for the Blind was authorized to administer the pensions. This Commission was founded in 1915 and has always been composed of five individuals appointed by the governor to serve without pay for four years. To the probate judge in each county was given the work of passing on the credentials of each applicant. During the next two years there qualified as eligible almost 6,000 applicants which was more than twice as many blind as the United States Census for the Blind had found in Missouri. The two cents tax levy amounted to about \$950,000 which would pay less than 3,200 applicants at the rate of \$300 a year. The pension money was therefore quickly exhausted and no pensions were paid for that biennial period after April 1, 1922.

Of the 6,000 eligible applicants it was found that about one half had vision of not greater than light perception. It was accordingly decided by the General Assembly of 1923 to fix the visual limit as light perception instead of 20/450 as formerly. Changes were also made in that the annual income of husband and wife together should not exceed \$600 from all sources and that their joint property should not exceed \$5,000. Only those blind qualifying under the new requirements could receive the back pension money from April 1, 1922.

Every one was re-examined; a little over

3,000 applicants qualified under the new terms and received their back pension—which explains the present shortage in the pension fund. The payment of the back pensions in the summer of 1923 practically exhausted all the available funds from the 1922 taxes and in the spring of 1924 the pensions due in the latter part of 1923 were paid.

Thus the shortage has been carried on from year to year and that in spite of the fact that the General Assembly of 1925 raised the tax levy for these pensions to three cents on the \$100 property valuation. The three cents levy is as far as the people in the constitution amendment have authorized the state legislature to go. Therefore no criticism is due the legislature; it has done all in this regard that it could do.

How does Missouri compare with other states regarding relief for the blind? Four other states have flat amounts of pension for the blind, viz., Illinois, Kentucky and Ohio, each \$250 annually and New Hampshire \$150 annually. Twelve states have the sliding scale form of relief, that is, each blind individual is given relief according to his or her needs. Connecticut and Wisconsin pay on the sliding scale up to \$360 a year, Colorado, Iowa, Idaho, Maine, Minnesota, Massachusetts, New Jersey and New York furnish relief by the sliding scale up to \$300 a year, California up to \$180 a year and Kansas puts no limit by law to relief by the sliding scale. The sliding scale is certainly the method of choice in this country, twelve states using this plan as against five states furnishing flat amounts of pension. The blind in Missouri are strongly opposed to the sliding scale. They argue that it would be impossible to get the state to go beyond the three cents levy on the \$100 property valuation; no other state has been as liberal to its blind. Then the \$25 a month to each blind individual is little enough and it would be tragic to cut this down at all. The blind say that it is better to pay an appreciable amount to some than to furnish twice as many with a sum wholly inadequate. On the other hand, we must remember that when a workman has had his vision reduced to 20/220 he is considered as industrially blind, that is, no longer able to see well enough for industrial work. There are about 4,000 blind individuals in Missouri with vision lying between 20/220 and light perception, none of whom now receive a cent of pension money. Those with vision of 1/200 and less are fully as helpless and incapacitated as a totally blind person. Barring these poor creatures from any participation in the pension is tragic and heart-rending for any but a stony hearty medical examiner. It might be added that in the

changes in the law passed by the General Assembly of 1925, light perception was interpreted as vision no grater than motion of the hand at one foot.

There is a greatly inadequate number of qualifying eye specialists in towns of less than 5,000 population to make the necessary examination of applicants for the pension. Ninety five of the 114 counties of the state are without accepted eye physicians. This does not mean that the training and ability is not in the smaller places, but that the eye specialists of those towns are indifferent about qualifying as such. That means they will not take the examination of the American Board for Ophthalmic Examinations and thus establish their recognition as eye specialists. Any licensed physician can call himself an eye specialist but in order to demonstrate his fitness as such he should obtain the certificate of this board. Thus far only two men in Missouri outside of Saint Louis and Kansas City hold this very important certificate.

REPORT OF THE AUDITORS

On another page* in this issue we publish the report of Kessler, Cartall & Company, St. Louis, certified public accountants, who were employed by the Executive Committee to audit the financial records of the Association for the years 1924, 1925 and the first six months of 1926 ending June 30. We also publish the budget of expenses which the Executive Committee established at the time the audit of the books was ordered.

NEWS NOTES

The friends of Dr. F. W. Gale, Bismarck, will be grieved to learn of his bereavement through the loss of his son, Vernon, who died of pneumonia on August 10.

The Fourth Councilor District will hold a meeting at Trenton, October 28. Dr. E. A. Duffy, Trenton, Secretary of Grundy County Medical Society, is preparing the program.

Dr. C. R. Woodson, St. Joseph, was host to the Buchanan County Medical Society on Tuesday, August 31, when he gave the annual dinner to the society which has become an established institution in St. Joseph.

Dr. T. G. Orr, Kansas City, was elected president of the Missouri Valley Medical As-

sociation at their annual meeting held in Omaha, September 17. Dr. Charles Wood Fassett, Kansas City, was reelected secretary.

Dr. Fred B. Kyger, Kansas City, has returned from a five months' European trip during which he spent most of his time doing post-graduate work in Vienna. He also visited France, Italy, Austria, Hungary and Germany.

Dr. George Gellhorn, St. Louis, was one of the speakers invited to give addresses at the meeting of the Vancouver Medical Association Summer School, Vancouver, B. C., September 13-16. Dr. Gellhorn delivered four lectures during the meeting.

The American Dietetic Association will hold its ninth annual meeting in the Ambassador Hotel at Atlantic City, October 11-13. An attractive program has been prepared with many speakers from the medical profession and dietitians of prominence throughout the country.

As a preliminary step toward the building of a new negro hospital and the improvement of the General Hospital at Kansas City and the Tuberculosis Sanatorium at Leeds, Doctor Ernest W. Cavaness, director of public health, Kansas City, made a two weeks inspection tour of hospitals in eastern cities where he expects to obtain information regarding modern equipment and buildings for hospitals.

The Deaconess Hospital, St. Louis, has begun a campaign for raising \$700,000 to be used in the erection of a new hospital. The present quarters are not sufficiently commodious and modern to care for the large number of patients desiring admission to the institution. The new hospital will cost more than a million dollars, but funds already on hand and available make it unnecessary to raise more than \$700,000 to complete the building.

One of the interesting features of the Clinical Conference at Kansas City, October 11-15, will be the large number of alumni dinners scheduled for Wednesday night, October 13, in the Baltimore Hotel. Alumni of more than forty medical schools have arranged for dinners. The dinner for the Ensworth-Central-Northwestern medical schools will be given at St. Joseph on the same night, the occasion having been transferred to St. Joseph at the request of Dr. Charles Geiger. Dr. H. S. Major, 3100 Euclid Avenue, Kansas City, is Chairman of the Committee on Arrangements for alumni dinners.

*Page 381.

At the completion of its recent European Study Tour, the Travel Study Club of American Physicians elected Dr. Fred H. Albee, New York, as president, Drs. Edward B. Heckel, Pittsburgh, and John P. Lord, Omaha, as vice presidents, and Dr. Richard Kovacs, New York, as secretary. Plans are being prepared for the next study trip, including the Central European countries, Germany, Austria, Czechoslovakia, Hungary and Italy.

The 12th Councilor District, Dr. Spence Redman, Platte City, Councilor, held a meeting at Excelsior Springs, September 30. A report of this meeting will be published in the next issue. On September 9 the 15th Councilor District, Dr. L. J. Scofield, Warrensburg, Councilor, held a meeting at Baldwin Lake Club House near Pleasant Hill. Other Councilor District meetings are being planned as follows: October 15, Ninth Councilor District, Dr. A. R. McComas, Sturgeon, Councilor, at Columbia. October 28, Fourth Councilor District, Dr. George M. Bristow, Princeton, Councilor, at Trenton. October 28-29, Twenty Eighth Councilor District, Dr. T. O. Klingner, Springfield, Councilor, in cooperation with the meeting of the Southwest Missouri Medical Society.

In addition to the articles enumerated in our letter of July 29, the following have been accepted for New and Nonofficial Remedies:

The Gilliland Laboratories, Inc.

Antistreptococcic Serum 20 cc.

Lederle Antitoxin Laboratories

Poison Oak Extract—Lederle (In Almond Oil)

Poison Oak Extract—Lederle (In Almond Oil) 1 cc.

Lehn & Fink, Inc.

Pituitary Substance—L. & F. Desiccated

Tablets Pituitary Substances—L. & F. Desiccated, $\frac{1}{2}$ grain

Anterior Pituitary—L. & F. Desiccated

Tablets Anterior Pituitary—L. & F. Desiccated 1 grain

Tablets Posterior Pituitary—L. & F. Desiccated, 1/10 grain

Eli Lilly & Company

Diphtheria Antitoxin, Purified, Concentrated—Lilly

H. K. Mulford Company

Ivyol

Hypo Units Ivyol 0.7 cc.

E. R. Squibb & Sons

Erysipelas Streptococcus Antitoxin Concentrated—Squibb 15 cc.

OBITUARY

GEORGE MARVINE TUTTLE, M.D.

On the second of September the many friends of Doctor George Marvine Tuttle, St. Louis, were startled by the unexpected news of his sudden death in London, England.

Doctor and Mrs. Tuttle and their only child, Wallace, started on a pleasure tour of Europe in the middle of June. Although for several years Doctor Tuttle had suffered from an organic heart condition, at the time of his departure for Europe there was no suspicion of illness which might prove troublesome. In fact, the heart condition had never interfered with his work up to this time nor had he been conscious of any disability from it.

On the morning of September second while waiting for Wallace, who was to take a train with him for Canterbury, Doctor Tuttle suddenly succumbed in his hotel room in London. Death was practically instantaneous.

Doctor Tuttle was the son of the late Bishop Sylvester Tuttle who was for many years Episcopal Bishop of Missouri, and Presiding Bishop of the Episcopal Church in the United States. He was educated in St. Paul's School at Concord, New Hampshire, and received his medical education at Columbia University in New York City. After serving his hospital internship in New York he began practice in St. Louis, devoting particular attention to diseases of children. He became one of the foremost practitioners in this specialty in the Middle West.

Almost from the beginning of his medical career in St. Louis, Doctor Tuttle was connected with the staff of St. Luke's Hospital and at the time of his death was secretary of that body, having acted in this capacity for the past twenty five years. At the time Washington University took over control of the St. Louis Children's Hospital, he was made physician in chief of this institution. Those who knew of his work at that time marveled that he could give the time necessary to attend to the manifold duties entailed by such an appointment. But nothing that he should do was left undone, although he was obliged to make many trips to the hospital located at Jefferson and Adams streets.

For thirty years he was on the teaching staff of Washington University Medical School both as lecturer and clinician. At the time of his death he was Clinical Professor of pediatrics and Consulting Physician at the Children's Hospital.

From the time of its organization, more than twenty years ago, Doctor Tuttle was president

of the St. Louis Pure Milk Commission. I do not remember that he missed more than one meeting of the Commission, unless he was out of town.

Doctor Tuttle was the author of a textbook on diseases of children that went through several editions. This book was particularly valuable to students. Despite a very large and exacting practice, Doctor Tuttle kept well informed concerning modern methods and his general knowledge of medicine was remarkable.

There are very few physicians who will be so sadly missed by a host of patients; for them he can never be replaced. He was not only the physician, but the friend and counselor. No time was inopportune for him, no amount of effort too great where it was possible for him to aid or befriend some one in distress. There was still work for him to do, and much of it can be done by no other man. This man's busy, unselfish life is an example of the type of physician the world needs and so sadly lacks.

P. G. HURFORD.

JOHN L. TIERNEY, M.D.

To the many friends of Doctor John L. Tierney, St. Louis, the news of his death on July twenty eighth was indeed a blow. For some time Doctor Tierney had been in Santa Fe, New Mexico, recuperating from exhaustion brought on by excessive work. However, his condition was not considered of a serious nature and his friends in St. Louis had supposed him progressing rapidly toward recovery when the news of his death was made known. In fact all reports were to the effect that he had recovered his former strength and could tire out any of his associates at hard and prolonged exertion. A few hours preceding his death he had played eighteen holes of golf, which had been his daily custom for several weeks. Unfortunately, he was seized with an attack of angina pectoris and died within a few hours. Never before had he exhibited any evidence of possible coronary disease, nor did any appear with the exception of a small thrombus discovered at autopsy.

Doctor Tierney received his college education at St. Mary's College, St. Marys, Kansas, where he earned the B.A. degree in 1910 and the degree of M.A. in 1912. In 1914 he received his medical degree from the St. Louis University School of Medicine and did post-graduate work in the Harvard University Medical School. After completing his hospital internship in St. John's Hospital, St. Louis, he entered into partnership with Doctor William Engelbach, specializing in internal medicine. He became widely known as a

diagnostician and achieved remarkable success in this specialty. In 1923 the partnership with Doctor Engelbach was dissolved, Doctor Tierney becoming the partner of Doctor George W. Wilson, his classmate and friend of many years.

At the time of his death Doctor Tierney was an assistant professor of medicine in the St. Louis University School of Medicine and physician for St. Mary's Hospital, St. Mary's Infirmary and the Mount St. Rose Hospital. He was a Fellow of the American Medical Association and a Fellow of the American College of Physicians and Surgeons. He was the author of many articles relating to the pituitary glands and other phases of internal medicine.

Due to his charming manner and unselfish disposition Doctor Tierney played an active part in the student activities of St. Louis University. In "The Masque" which followed the Pageant of St. Louis in 1914 he played the role of "St. Louis." To say that he was loved by all who knew him would be indeed but an inadequate expression of the devotion accorded him by his many friends in St. Louis and elsewhere. His death leaves a void which for many can never be refilled. Without reservation or thought for himself Doctor Tierney gave of his best for the benefit of the suffering; he was indeed a true and understanding friend of man in general, and especially of each and every patient with whom he came in contact.

JOSEPH BRANNON SCOTT, M.D.

The unexpected death of Doctor Joseph Brannon Scott, Marceline, Missouri, was a shock to his many friends and patients. For some time Doctor Scott had been failing in health, and had entered the hospital of the Mayo Brothers, in Rochester, Minnesota, hoping to find relief. However, it was of no avail and word of his death on August 11, 1926, was received.

Obtaining his medical degree from The Vanderbilt University, Nashville, Tennessee, Doctor Scott located in Dyersburg, Tennessee, later going to Marionville, Missouri. In 1917 he transferred his practice to Marceline, Missouri, where he served the community as medical adviser until the time of his death. Just prior to his last illness, Doctor Scott was elected Secretary of the Linn County Medical Society.

Doctor Scott was a splendid character and an able physician. His pleasing personality won for him many friends who will greatly miss his wise counsel and sympathetic aid.

ELI B. BROWN, M.D.

The death of Doctor Eli B. Brown, of Billings, Missouri, is indeed regrettable. At the time of his death on May 5, 1926, he was eighty one years of age.

Doctor Brown received his medical education in the College of Physicians and Surgeons, Keokuk, Iowa. After receiving his medical degree in 1876 Doctor Brown practiced his profession in Ozark, Texas, where he remained for several years. He then located at Billings, Missouri, and for the past thirty two years served this community faithfully and well.

Doctor Brown has been a member of our Association ever since he located at Billings. Among his effects was found a pocket card certifying that he registered as a delegate to our Association from the Southwest Medical Society at the Springfield meeting in 1889. His kindly attitude and tireless patience endeared him to the hearts of those with whom he came in contact and he will be missed by many in his community.

FRANK M. FLOYD, M.D.

In the death of Doctor Frank M. Floyd, St. Louis, the Association has lost an able and respected member. Doctor Floyd graduated from the Marion-Sims Medical College, St. Louis, receiving his degree in medicine in 1897.

Specializing in surgery, Doctor Floyd spent his entire medical career in St. Louis and at the time of his death, on July 10, 1926, was consultant surgeon of the Frisco Railroad.

That death should come to a man just entering the best years of his life, is indeed sad to contemplate, and the many friends of Doctor Floyd will mourn the loss of an able surgeon and a friend who was highly esteemed by those whose privilege it was to know him.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

Camden County Medical Society, November 23, 1925.

Howard County Medical Society, January 8, 1926.

Chariton County Medical Society, January 20, 1926.

Reynolds County Medical Society, February 22, 1926.

Ralls County Medical Society, February 27, 1926.

Schuyler County Medical Society, March 25, 1926.

Franklin County Medical Society, March 29, 1926.

Howell-Oregon Medical Society, April 7, 1926.

Monroe County Medical Society, April 14, 1926.

Platte County Medical Society, April 23, 1926.

Atchison County Medical Society, April 26, 1926.

Saline County Medical Society, May 15, 1926.

Bates County Medical Society, September 17, 1926.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met in the Chamber of Commerce rooms, Cape Girardeau, Thursday, August 16, and was called to order by the president, Dr. M. H. Shelby. The following answered to the roll call: Drs. D. H. Hope, B. W. Hays, N. F. Chostner, E. H. G. Wilson, C. A. W. Zimmerman, M. H. Shelby, and A. M. Murphy. The speakers of the evening failed to attend on account of the rain, and as there were no papers to be read, a general table discussion was enjoyed by all.

A. M. MURPHY, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

Our August meeting was held Thursday, August 26, in Kearney, and was unusually well attended, some fifty being present.

The Ladies' Auxiliary met with us, this being our "Public Health Meeting" of interest to all alike. The arrangements for the meeting were made perfect in detail by Dr. W. C. Hamilton, of Kearney.

On the beautifully shaded grounds of the Baptist Church, were tables and chairs for the accommodation of the guests at a bountiful dinner, cafeteria style; Kearney dinners are all alike—perfect in every detail.

Dr. Herman E. Pearse, Kansas City, was the speaker for the afternoon. Known to most of our people, he was given a cordial reception. The doctor gave a scientific lecture on "Errors in the Diagnosis of Appendicitis" in language that all could understand. He illustrated his points by reports of numerous cases from his extensive hospital experience. He commended the Mayo Brothers for giving to the profession the results of their research work in this particular class of cases, as well as others.

The public address by Dr. Pearse followed, subject: "The County Health Unit." In this practical talk, the doctor held the audience with his convincing manner of speech. Space forbids a detailed report; we wish more could have heard it—those who were absent missed something. Preventive medicine was handled by the doctor in a masterful way, particularly the immunizing of children against diphtheria and scarlet fever. The various "cults" came in for caustic criticism, as well as parents who allow prejudices to overcome better judgment.

Discussions were many and rational; pastors and teachers spoke; of the former, Rev. J. Frank Baker and Rev. E. Hanna, Excelsior Springs, Rev. Luetzow, Liberty Methodist Church, Rev. Barr, the Liberty Christian Church, and Rev. Moody, Kearney Christian Church. [Readers will pardon my ungrammatical mention of these good men; I do not know their given names; tussling with a leaky fountain pen, writing on one's knee, in a wiggly book, is not conducive to accuracy in expression.] All the clergymen offered full cooperation and sanction of our work. Rev. Barr invited any speakers to attend and participate in a union service in his church, August 29.

Among the members speaking, were Drs. Rothwell, Matthews, Rupe, Cuthbertson, Suddarth, and Gaines. Dr. Hamilton presided.

Matters took on definite shape in the election of a

temporary official body to "set the ball rolling," the following being named:

- Miss Roxie McGinness, Kearney, Chairman;
- Mrs. Ernest Kline, Kearney, Vice-Chairman;
- Miss Lulu Morrison, Secretary;
- Mrs. S. S. Major, Treasurer.

Some sharp criticism of county courts might have been noted, wherein the "penny-wise, pound foolish" officials received their share of attention.

Expressions of gratitude to the Baptist Church people, and for the good words of the clergy, and of Doctor Pearse were heard on every hand.

Next meeting will be held in Excelsior Springs, the last Thursday in October.

J. J. GAINES, M.D., Secretary.

MISCELLANY

REPORT ON ACCOUNTS
OF THE

MISSOURI STATE MEDICAL ASSOCIATION
JANUARY 1, 1924 TO JUNE 30, 1926

KESSLER, CARTALL & Co.
CERTIFIED PUBLIC ACCOUNTANTS
LA SALLE BUILDING
ST. LOUIS, Mo.

August 6, 1926

Missouri State Medical Association,
St. Louis, Mo.

Gentlemen:

Pursuant to your request, we have made an examination of the accounts and records of the Missouri State Medical Association for the period January 1, 1924, to June 30, 1926, and have compiled therefrom the following attached exhibits:

- Exhibit A, Balance Sheet, June 30, 1926.
- Exhibit B. Statement of General Fund Receipts and Disbursements, January 1, 1924, to June 30, 1926.
- Exhibit C-1, Statement of Legislative Fund Receipts and Disbursements, January 1, 1924, to June 30, 1926.
- Exhibit C-2, Statement of Sinking Fund Receipts and Disbursements, January 1, 1924, to June 30, 1926.
- Exhibit C-3, Statement of Defense Fund Receipts and Disbursements, January 1, 1924, to June 30, 1926.
- Exhibit D, Dues Receivable and Membership by Counties, June 30, 1926.
- Exhibit E, Accounts Receivable—Advertisers—June 30, 1926.

The Balance Sheet, Exhibit A attached hereto, shows the financial position of the Association as at June 30, 1926, and the accounts included therein are subject to the following explanatory comments:

COMMENTS

CASH: (\$17,049.34)

The cash in the sum of \$17,049.34 at June 30, 1926, consisted of the following funds:

General fund	\$10,732.92
Legislative fund (Traders Bank).....	4,736.58
Sinking fund (Traders Bank).....	658.57
Defense fund (Traders Bank).....	921.27
Total	<u>\$17,049.34</u>

The General Fund consisted of cash on hand and in banks as shown below:

Particulars	Amount
First National Bank, St. Louis, Mo.....	\$ 763.11
Traders Bank, Salisbury, Mo.	8,714.33
CASH ON HAND:	
Members' dues (deposited July 14 and 15)....	\$ 1,233.00
Members' dues (deposited August, 1926).....	20.00
Dr. Goodwin's expense fund	2.48
Total	<u>\$10,732.92</u>

Certificates were obtained from the depositaries in the verification of the cash in banks and that on hand at June 30, 1926, was traced into the Traders Bank account.

Checks paid by banks, approved vouchers, invoices, and other data, were seen in the verification of the disbursements and the receipts as recorded on the cash books were traced into the bank accounts or were otherwise satisfactorily accounted for. Considerable time was consumed in the verification of the members' dues received, as no chronological record thereof was kept, the dues being summarized by counties. The details of the receipts and disbursements are shown in the attached Exhibits B and C.

ACCOUNTS RECEIVABLE, ADVERTISERS: (\$697.59)

The details of the accounts receivable from advertisers are shown in Exhibit E attached hereto, together with a list of accounts considered uncollectible in the sum of \$723, and a list of reciprocal advertisers giving supplies and service in exchange for advertising space.

No accounts are carried on the books for reciprocal advertisers and the values of the items furnished by them in exchange for advertising space have not been included in the attached statements of receipts and disbursements, as it was not possible for us to ascertain without a considerable amount of work, the full details of these transactions.

The balances due from advertisers are stated as reflected by the records without confirmation by the debtors.

DUES RECEIVABLE: (\$6,183.00)

Dues receivable in the sum of \$6,183.00 were reviewed by us as of June 30, 1926, and are listed by counties in the attached Exhibit D, a summary of which follows:

Particulars	Amount
Dues receivable, year 1923.....	\$ 20.00
Dues receivable, year 1924.....	280.00
Dues receivable, year 1925.....	770.00
Dues receivable, year 1926.....	5,183.00
Total	\$6,254.00
Less: Unapplied credits.....	71.00
Dues receivable, June 30, 1926.....	<u>\$6,183.00</u>

A reserve for uncollected dues receivable equaling the outstanding dues in the sum of \$6,183 has been set up. This account is necessary because the Association conducts its accounts on a cash basis, the dues not being taken into the income account until they are collected.

The county societies were not requested to confirm the unpaid dues shown in Exhibit D, but the secretary informed us that lists will be sent to them the latter part of the year for verification.

The Association at June 30, 1926, was composed of 3,287 members as shown by the records.

FURNITURE AND FIXTURES: (\$1,150.00)

No account had been kept in the past showing the cost of the furniture and fixtures, therefore an inventory was taken and an estimated depreciated value of \$1,150.00 placed thereon.

ACCOUNTS PAYABLE: (\$549.46)

The accounts payable consisted of supplies and expense bills in the sum of \$546.46, and prepaid ad-

vertising in the sum of \$3.00. Included herewith are all direct liabilities of which we had cognizance.

There is a contingent liability on twenty-six (26) malpractice suits on which the maximum liability is limited to \$2,600.00.

GENERAL REMARKS:

The original vouchers, remittance slips and other data were found to be in a satisfactory condition, but the general records were inadequate and a number of clerical errors were noted in those kept. This condition has been corrected by the installation of a more complete accounting system which will provide an adequate check of the transactions of the Association and facilitate the preparation of operating statements.

We find the following Fidelity Bonds to be in force:

On the Treasurer of the Association.....	\$20,000.00
On the Secretary of the Association.....	1,000.00

Should you desire any further information regarding the attached statements and accounts, we shall be pleased to furnish it upon request.

Yours very truly,

KESSLER, CARTALL CO.,
Certified Public Accountants.

MISSOURI STATE MEDICAL ASSOCIATION BALANCE SHEET, JUNE 30, 1926

EXHIBIT A

ASSETS

Cash:	
General fund, Exhibit B	\$10,732.92
Legislative fund, Ex. C-1	4,736.58
Sinking fund, Exhibit C-2	658.57
Defense fund, Exhibit C-3	921.27
	<u>\$17,049.34</u>
Acc'ts receivable, advertisers	697.59
	<u>\$17,746.93</u>
Dues receivable (Exhibit D)	6,183.00
Furniture and fixtures (book value)	1,150.00
	<u>\$25,079.93</u>
LIABILITIES	
Accounts payable:	
Supplies and expenses...	\$ 546.46
Prepaid advertising	3.00
	<u>\$ 549.46</u>
Reserve for uncollected dues receivable	6,183.00
Funds:	
General	\$10,732.92
Legislative	4,736.58
Sinking	658.57
Defense	921.27
	<u>\$17,049.34</u>
Surplus	1,298.13
	<u>\$25,079.93</u>

MISSOURI STATE MEDICAL ASSOCIATION STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS, GENERAL FUND, JANUARY 1, 1924, TO JUNE 30, 1926

EXHIBIT B

Particulars	Year 1924	Year 1925	Six Months Ended June 30, 1926
Balance January 1.....	\$ 2,712.69	\$ 1,783.89	\$ 1,467.61
Receipts:			
Membership dues (Inc. subs. to Med. Jour.)	\$15,390.50	\$15,863.75	\$20,141.00
Journal advertising ..	8,019.55	8,170.54	4,409.66
Journal Subs. (Non- members)	42.00	29.00	27.50
Office rent	270.00	495.00	315.00
Sale of furniture	65.00	.....	.....
America Med. Association	250.00	.....	.....
Interest on cash Bal...	75.00	89.40	107.10
Insurance refund	5.00	.....	.....
Total receipts	<u>\$24,117.05</u>	<u>\$24,647.69</u>	<u>\$25,000.26</u>
Total cash for period..	<u>\$26,829.74</u>	<u>\$26,431.58</u>	<u>\$26,467.87</u>

Particulars	Year 1924	Year 1925	Six Months Ended June 30, 1926
Disbursements:			
Cash transferred to Legislative Fund	\$ 3,113.20	\$ 3,216.45	\$ 2,431.94
Dues refunded	20.00	10.00	5.00
Secretary's salary	4,000.00	4,600.00	2,400.00
Treasurer's salary	200.00	300.00	300.00
Office salaries	3,470.35	3,581.36	1,617.33
Rent and light	1,152.70	1,410.30	711.50
Telephone and telegraph	369.17	771.55	377.21
Printing, stationery and office supplies	874.98	574.53	374.81
Expenses of meetings..	577.89	506.10	300.80
Badges	66.15	137.72	130.00
Traveling expenses ...	280.06	646.84	379.50
Office furniture	87.97	.....	65.15
Insurance	40.08	29.56	52.50
Postage	203.50	451.61	245.28
Legal fee	500.00	142.50	500.00
Springfield exhibit	200.00	.....	.....
Mis. Sup. and Exp....	498.02	504.62	247.07
Journal publication	8,030.94	6,626.63	4,414.09
Commission on Adv....	1,055.15	1,152.64	705.57
Cash Dis. to advertisers	305.69	301.56	177.20
Donations .....	.....	.....	300.00
Total disbursements	<u>\$25,045.85</u>	<u>\$24,963.97</u>	<u>\$15,734.95</u>
Balance at end of period	<u>\$ 1,783.89</u>	<u>\$ 1,467.61</u>	<u>\$10,732.92</u>

NOTE: Practically all dues are collected during the first half of each year, and this explains the large cash balance as at June 30, 1926.

MISSOURI STATE MEDICAL ASSOCIATION STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS, LEGIS- LATIVE FUND, JANUARY 1, 1924, TO JUNE 30, 1926

EXHIBIT C-1

Balance January 1	\$ 103.70	\$ 617.95	\$ 2,371.54
Receipts:			
Cash transferred from General Fund	\$ 3,113.20	\$ 3,216.45	\$ 2,431.94
Interest on cash balance	14.40	28.50	72.00
Total receipts	<u>\$ 3,127.60</u>	<u>\$ 3,244.95</u>	<u>\$ 2,503.94</u>
Total cash for the period	<u>\$ 3,231.30</u>	<u>\$ 3,862.90</u>	<u>\$ 4,875.48</u>
Disbursements:			
Salary, Wm. Condon..	\$ 2,400.00	\$ 800.00	.....
Campaign Fund	150.00	.....	.....
Meeting expenses .....	.....	555.82	.....
Letters, printing, etc...	63.35	64.04	138.90
Telephone and telegraph	.....	71.50	.....
Total disbursements	<u>\$ 2,613.35</u>	<u>\$ 1,491.36</u>	<u>\$ 138.90</u>
Balance end of period	<u>\$ 617.95</u>	<u>\$ 2,371.54</u>	<u>\$ 4,736.58</u>

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS, SINKING FUND, JANUARY 1, 1924, TO JUNE 30, 1926

EXHIBIT C-2

Particulars	Year 1924	Year 1925	Six Months Ended June 30, 1926
Balance January 1	604.57	622.57	640.57
Receipts:			
Interest on cash Bal's.	\$ 18.00	\$ 18.00	\$ 18.00
Balance end of period	<u>\$ 622.57</u>	<u>\$ 640.57</u>	<u>\$ 658.57</u>

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS, DE- FENSE FUND, JANUARY 1, 1924, TO JUNE 30, 1926

EXHIBIT C-3

Particulars	Year 1924	Year 1925	Six Months Ended June 30, 1926
Balance January 1	\$ 1,765.52	\$ 1,059.27	\$ 1,092.27
Receipts:			
Interest on cash balance	\$ 51.00	\$ 33.00	\$ 29.00
Total cash for period	<u>\$ 1,816.52</u>	<u>\$ 1,092.27</u>	<u>\$ 1,121.27</u>
Disbursements:			
Defense in malpractice suits	(8) 757.25	.....	(2) \$200.00
Bal. at end of period	<u>\$ 1,059.27</u>	<u>\$ 1,092.27</u>	<u>\$ 921.27</u>

DUES RECEIVABLE AND MEMBERSHIP BY COUNTIES,
JUNE 30, 1926EXHIBIT D
DUES RECEIVABLE

Counties	Year 1924	Year 1925	Year 1926	Total Dues Receivable No. Amount	No. of Mem- bers
Adair	\$ 5.00	\$ 16.00		(2) \$ 21.00	11
Atchison					14
Audrain			24.00	(3) 24.00	24
Barry	5.00	10.00	32.00	(4) 47.00	12
Barton			16.00	(2) 16.00	10
Bates		5.00	16.00	(2) 21.00	15
Benton			40.00	(5) 40.00	13
Boone			48.00	(6) 48.00	36
Buchanan	15.00	25.00	224.00	(28) 264.00	126
Butler	5.00	10.00	48.00	(6) 63.00	18
Caldwell			32.00	(4) 32.00	17
Callaway	5.00	5.00	32.00	(4) 42.00	18
Camden					3
Cape Gir.....			40.00	(5) 40.00	33
Carroll	10.00	20.00	48.00	(6) 78.00	15
Carter- Shannon					8
Cass	15.00	15.00	56.00	(7) 86.00	25
Chariton					20
Christian			32.00	(4) 32.00	11
Clark			24.00	(3) 24.00	5
Clay		5.00	136.00	(17) 141.00	33
Clinton	10.00	30.00	104.00	(13) 144.00	15
Cole			24.00	(3) 24.00	27
Cooper			48.00	(6) 48.00	18
Crawford			16.00	(2) 16.00	7
Dade	5.00	5.00	8.00	(1) 18.00	1
Dallas	5.00	5.00	40.00	(5) 50.00	5
Daviess			48.00	(6) 48.00	13
Dekalb			64.00	(8) 64.00	8
Dent			8.00	(1) 8.00	4
Dunklin	10.00	25.00	72.00	(9) 107.00	23
Franklin					19
Gasconade- Maries-Osage		10.00	72.00	(9) 82.00	16
Gentry	5.00	10.00	40.00	(5) 55.00	14
Greene	20.00	30.00	200.00	(25) 250.00	101
Grundy	5.00	20.00	64.00	(8) 89.00	20
Harrison			40.00	(5) 40.00	13
Henry		5.00	24.00	(3) 29.00	24
Holt	5.00	5.00	8.00	(1) 18.00	14
Howard					11
Howell- Oregon					26
Iron			24.00	(3) 24.00	3
Jackson			232.00	(29) 232.00	529
Jasper	10.00	35.00	136.00	(17) 181.00	46
Jefferson	\$	\$	\$ 24.00	(3) 24.00	14
Johnson	5.00		40.00	(5) 50.00	18
Knox		25.00	64.00	(8) 89.00	10
Laclede			16.00	(2) 16.00	12
Lafayette		5.00	72.00	(9) 77.00	31
Lawrence- Stone	5.00	15.00	168.00	(21) 188.00	28
Lewis		5.00	16.00	(2) 21.00	8
Linn	15.00	15.00	32.00	(4) 62.00	22
Livingston	5.00	10.00	64.00	(8) 79.00	17
Macon			32.00	(4) 32.00	13
Madison					6
Marion		10.00	80.00	(10) 90.00	22
Mercer		15.00	48.00	(6) 63.00	11
Miller	5.00	5.00	16.00	(2) 26.00	9
Mississippi	5.00	5.00	8.00	(1) 18.00	9
Moniteau			16.00	(2) 16.00	9
Monroe					8
Montgomery			8.00	(1) 8.00	7
Morgan					2
New Madrid	5.00	10.00	80.00	(10) 95.00	14
Newton	10.00	25.00	48.00	(6) 83.00	19
Nodaway	10.00	15.00	112.00	(14) 137.00	29
Pemiscot	10.00	15.00	56.00	(7) 81.00	19
Perry		5.00	64.00	(8) 69.00	9
Pettis			32.00	(4) 32.00	40
Phelps		5.00	56.00	(7) 61.00	16
Pike			40.00	(5) 40.00	12
Platte					15
Polk	10.00	15.00	40.00	(5) 65.00	7
Pulaski		5.00	16.00	(2) 21.00	10
Putnam		10.00	40.00	(5) 50.00	8
Ralls					3
Randolph		5.00	32.00	(4) 37.00	34
Ray			40.00	(5) 40.00	16
Reynolds			8.00	(1) 8.00	6
St. Charles		5.00	16.00	(2) 21.00	23
St. Clair, '23	20.00				..
St. Clair, '24	30.00	30.00	48.00	(6) 128.00	8
St. Francois	10.00	50.00	152.00	(19) 212.00	23
St. Genevieve		5.00	8.00	(1) 13.00	6
St. Louis Co.	5.00	5.00	48.00	(6) 58.00	55
St. Louis City	10.00	125.00	1,088.00	(136) 1,223.00	1,033
Saline					34

Counties	Year 1924	Year 1925	Year 1926	Total Dues Receivable No. Amount	No. of Mcm- bers
Schuyler			8.00	(1) 8.00	6
Scotland		5.00	16.00	(2) 21.00	6
Scott			48.00	(6) 48.00	24
Shelby		5.00	32.00	(4) 37.00	15
Stoddard		15.00	32.00	(4) 47.00	17
Sullivan	5.00	5.00	16.00	(2) 26.00	9
Taney			8.00	(1) 8.00	5
Texas			32.00	(4) 32.00	14
Vernon-Cedar			32.00	(4) 32.00	35
Wayne			32.00	(4) 32.00	8
Webster			8.00	(1) 8.00	11
Worth			8.00	(1) 8.00	1
Wright- Douglas	5.00	15.00	48.00	(6) 68.00	17
Totals ..	\$300.00	\$770.00	\$5,184.00	(648) \$6,254.00	3,287

Less Unapplied Credits:	
Barry	\$ 3.00
Buchanan	5.00
Greene	3.00
Grundy	3.00
Howard	8.00
Jackson	8.00
Jasper	6.00
Newton	8.00
Pemiscot	3.00
Phelps	13.00
Putnam	8.00
Wayne	3.00
Total unapplied cash	\$71.00
Net dues receivable, June 30, 1926	\$6,183.00

EXHIBIT E

Accounts Receivable, Advertisers, June 30, 1926	Name	Amount	Period
Co-operative Med. Adv. Bureau		\$551.33	June, 1926
Kansas City Roentgen & Radium Institute		38.85	8/1/25 - 6/30/26
Wallace Sanitarium		5.00	June, 1926
Simpson-Major Sanitarium		12.50	June, 1926
Excelsior Springs Sanitarium		33.75	8/1/25 - 6/30/26
Missouri Baptist Sanitarium		6.50	June, 1926
G. Wilse Robinson Sanitarium		36.66	May and June 1926
Snodgrass Drug and Surgi- cal Supply Company		13.00	June, 1926
Total		\$697.59	
Uncollectible Accounts, (June 30, 1926):			
Bonner Springs Sanitarium		\$523.00	1920 - 4/1/26
Midwest Training Corporation		112.50	6/1/22 - 2/28/23
Punton Sanitarium		87.50	8/1/24 - 2/28/25
Total		\$723.00	
Reciprocal Advertisers:			
Columbia Cab Company			—
Missouri Pacific Railroad			—
Wabash Railway Company			—
Hotel Kupper			No contract seen
Buckingham Hotel			—
Melbourne Hotel			No contract seen
Baltimore Muehlbach			—
Better Business Bureau			No contract—used to fill un-
Hygeia-American Med. Assn.			sold advertising space.

BUDGET OF EXPENSES

The Executive Committee has prepared the following budget of the expenses of the Association for the period from January 1, 1926, to December 31, 1926.	
Salaries	\$8,000
Printing Journal	8,000
Legislation	4,500
Defense	1,900
Postage	500
Speakers Bureau (including postgraduate extension course)	1,000
Printing and Stationery	600
Traveling Expenses of President	500
Traveling Expenses of Secretary	300
Telegrams and Telephone	800
Rent of Offices	1,380
Executive Committee Meetings	300
Contingent Fund	500
Total	\$28,280

BOOK REVIEWS

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Mrs. M. H. Melish, H. Burton Logie, M.D., and Charlotte E. Eigen Mann, B.A. Volume XVII. 1925. Published May, 1926. Philadelphia and London: W. B. Saunders Company. 1926. Cloth \$13.00 net.

A comprehensive collection of papers by a long list of workers at the Mayo Clinic and the Mayo Foundation constitutes the present volume. The subject matter is very conveniently grouped under the heads of (1) alimentary tract, (2) ductless glands, (3) urogenital organs, (4) blood and circulation organs, (5) skin and syphilis, (6) head, trunk and extremities, (7) chest, (8) brain, spinal cord and nerves, (9) technic and (10) miscellaneous.

It presents the varied activities of the two institutions, and is fairly well divided between medical and surgical subjects. It illustrates as well the growing attention which has been given for years to the diagnostic and research factors at these institutions.

Most of the papers have been published elsewhere. Some of them are reproduced in full, some in abstract, and very special papers are referred to by title only. A full bibliography accompanies each paper.

It is impossible to quote individual papers, but the collection well merits close attention. W. B.

CLINICAL PEDIATRICS. By John Lovett Morse, A.M., M.D., Professor of Pediatrics, Emeritus, Harvard Medical School; Consulting Physician at the Children's, Infants' and Floating Hospitals, Boston. Illustrated. Philadelphia and London. W. B. Saunders Company. 1926.

This new work upon the general subject of children's diseases, embracing 848 pages and numerous illustrations, contains a generous amount of material which the writer, from a long experience as pediatrician and teacher in one of the foremost medical schools, has found to represent the subject. Professor Morse has put into this volume the ripe experience of a lifetime and has excluded from the pages theories and methods which he believes are supersitious or unproven. The contents deal only with those conditions which he has seen and which come into the practice of the physician and pediatrician. Throughout the book the author's refreshing humor and his personal estimation of values give an individuality to the text which makes it extremely interesting reading. Clinical Pediatrics is a splendid work and will be useful to all students and practitioners in this field. F. C. N.

ABT'S PEDIATRICS. By 150 specialists. Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octave volumes totaling 8000 pages with 1500 illustrations, and separate Index Volume free. Now ready—Volume VII containing 1102 pages with 388 illustrations and General Index to Volumes I to VIII. Philadelphia and London. W. B. Saunders Company, 1926. Cloth, \$10,000 per volume. Sold by subscription.

This is the last volume in the series, all of which have been reviewed in this Journal. As an illustration of the spaciousness of this latest volume of 1100 pages there are 388 illustrations, 266 pages are devoted to diseases of the skin, 48 pages to the ear, 109 to the eye, 178 to a consideration of children's hospital management and instruction, 39 to medico-legal

questions concerned with deaths of children, 225 pages to tumors, 46 pages to encephalitis, 155 pages to animal parasites. The authors of the individual chapters are well known in their fields. Any library, the physician, the county society, or the university, has in this extensive series, the largest collection of pediatric material and references which can be found in a short space of time.

The Index Volume, in separate cover, fills a most useful purpose in this extensive series of eight volumes. Those who have waited for its appearance find that it is now easy to reach not only the individual chapter but the different considerations of the same subject that have been mentioned by various writers. F. C. N.

PARASITIC PROTOZOA OF MAN. By Charles F. Craig, M.D., M.A. (Hon.) Lieut. Colonel, Medical Corps, U. S. Army, D. S. M., Late Director of Laboratories and Professor of Bacteriology, Parasitology and Preventive Medicine, Army Medical School, Washington, D. C., etc. Illustrated. Philadelphia and London. J. B. Lippincott Company.

This book is strictly a treatise on protozoa aimed particularly as a manual for health officers, practitioners of medicine, students and research workers who deal with this branch of medicine. Not even the spirochetes are included in this text as the author believes there is not sufficient evidence to justify classing organisms of this type as protozoa.

The book opens with a general discussion of the protozoa and is followed by detailed descriptions of such important organisms to man as the intestinal parasites of man, the blood and tissue parasites and other protozoa. There are three long chapters on the malaria plasmodia. The book is well written, well illustrated and easy to work with. A technical appendix and an index to authors are included. R. L. T.

HANDBOOK OF DISEASES OF THE RECTUM. By Louis J. Hirschman, M.D., F.A.C.S., Ex-President American Proctologic Society; Professor of Proctology, Detroit College of Medicine, etc. With two hundred fifty-two illustrations, mostly original, and five colored plates. Fourth Edition Revised and Rewritten. St. Louis. The C. V. Mosby Company. 1926. Price \$6.50.

This already popular volume by a recognized authority should become even more popular with the present edition, which has been brought up to date with the addition of much new material. It is obvious, from the many personal observations and individual experiences contained in the book, that the author includes only the procedures which he has tried out and found to be of value. One is struck with the sincerity with which the author discusses the various subjects and immediately feels a great deal of comfort and confidence in what he is reading.

The subject matter is very well balanced and exceptionally well treated, there being no hobby carried through the pages. The wonder is, how it is possible to include so much in one volume, but this is no secret when the conciseness and clearness of the descriptions and discussions are noticed.

The book is very well illustrated with drawings and photographs which are clear and of easy interpretation.

The work is of great value to both the specialist and the general practitioner. Of particular interest to the latter are the chapters under the following headings: Examination of the patient; Limitations of local anesthesia and office treatment; Constipation and Obstipation; Dysentery.

For the proctologist the work is indispensable. L. P. E.

THE JOURNAL

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COMMITTEE C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

NON-TUBERCULOUS HIPS IN CHILDREN SIMULATING TUBERCULOSIS

C. B. FRANCISCO, M.D.

KANSAS CITY, MO.

My purpose in presenting the subject of hips simulating tuberculosis in children is to remind those who are not interested especially in this subject that the diagnosis of hip conditions in children is a difficult problem.

A physician in any line of practice may be called upon to express an opinion as to the cause of lameness in a child in which it is evident that the hip is involved. The ordinary method of procedure is to have an X-ray nega-



Fig. 2. Case 1. Marked rarefaction of neck.



Fig. 1. Case 1. Slight rarefaction with decreased angle of neck of right femur.

tive made of the hip and if this shows definite joint change the usual conclusion is that the process is tuberculous. This is quite natural

when one considers what the rather recent teaching has been along this line. Prior to 1909 all cases of chronic hip joint conditions in children not definitely rheumatic were considered tuberculous.

In the fall of 1909, A. T. Legg, of Boston, read a paper in which he described a condition that has since come to be known as the Legg-Calvé Perthes hip, or osteochondritis deformans coxae juvenilis. Legg was the first one to call attention to this condition.¹ Calvé of France and Perthes of Germany published articles on the same condition at about the same time and since then numerous articles have appeared reporting cases of this condition. Osteochondritis juvenilis has now become a well recognized entity and the classical type is usually recognized and not often mistaken for tuberculosis. The diagnosis is made upon X-ray examination which shows characteristic changes, viz, the epiphysis is flattened, its ossifying center is distorted and the head often segmented; the neck of the femur is broader and shorter than normal and the angle lessened; and in some instances the acetabulum appears enlarged and irregular in outline. Usually the

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

1. Boston Medical and Surgical Journal, July 17, 1910.



Fig. 3. Case 1. Density of bone nearly normal. Note deformity of head, neck and acetabulum.

condition is associated with occasional attacks of pain but not always. The condition occurs most frequently in boys; onset occurs at about the age of 5 years. In the typical case one is rarely in doubt about the diagnosis.

Recently there have come under my observation five cases which presented very marked changes that did not conform to the usual picture of the Legg-Calvé Perthes condition. The children were older when their symptoms began, all of them being 10 years or over. They were all well nourished and well developed boys and none of them gave a history that suggested the presence of foci of infection. They each had a moderate limp and limitation of abduction. Only one case complained of pain and his pain had been very slight and was probably accounted for by the apparent slight displacement of the head on the epiphysis. The X-ray pictures were characterized by rarefaction of the head and neck of the femur, more marked in the region of the epiphysis. It was this rarefaction that was confusing, as in some of the cases it was not unlike an early tuberculous process. I was in doubt from four to six months, in some instances, as to whether or not the head and neck would break down; yet during all this time there was no muscle spasm nor any other physical sign of disease or inflammation, and there were no constitutional symptoms. In one case the head of the femur appeared for a time to be a sequestrum and one consultant suggested its removal. In all the cases the patients continued to grow and gain weight normally, and gradually the bone density returned. You will observe in the pictures that the resulting deformity of the head and acetabulum is irregular but not characterized by being flattened out, the irregularity of the head fitting fairly close into the irregularity of the

acetabulum, and that there is very little appearance of segmentation of the head. The neck of the femur is moderately thicker and shorter, also somewhat less dense, with the angle slightly decreased as compared with the normal.

The treatment has been fixation in a plaster spica or removable celluloid spica, with complete relief from weight bearing by means of a high shoe and crutches as long as the rarefaction was shown by X-ray. Only two cases have been under observation sufficiently long to justify a detailed report. The other three cases are still under treatment.

REPORT OF CASES

Case No. 1. George C. 10 years old. First seen November 19, 1924. Mother gave the following history: That child began to have a very definite right limp in October, 1924, but never complained of pain or discomfort in the hip. Always well except for measles and chickenpox some three or four years ago; 1 brother, younger, living and well; parents living and well. No history of injury.

On examination he was a well developed and nourished boy, walking with a moderate right limp. Right thigh and calf presented no atrophy but there was about a half inch shortening. Right hip extended completely; flexion limited to 90 degrees; abduction limited to 30 degrees; adduction and rotation free; no muscle spasm but the movements seemed to be a little guarded. Right tonsil diseased and enlarged. X-ray showed slight rarefaction of the right neck of the femur and the angle appeared to be a little less than on the opposite side. (Fig. No. 1, Case 1.) Was admitted to Mercy Hospital and on November 22, 1924, tonsils removed and spica cast applied; was given crutches and high shoe. November 29, 1924, was dismissed from hospital with instructions to report regularly to Out-patient Department. December 20, 1924, cast removed. X-ray picture showed very little change. February 14, 1925, the hip still presented slight limitation in abduction and X-ray showed definite coxa vara with marked rarefaction of the head and neck. Advised to continue crutches. May 28, 1925, X-ray showed a



Fig. 4. Case 2. Rarefaction of left neck with head slipped on epiphysis.

very marked rarefaction in the lower border of the acetabulum as well as of the neck in the epiphyseal region, which is suspicious of tuberculosis. (Fig. No. 2, Case 1.) At this time movements seemed a little more guarded, probably the result from continued fixation in casts. June 23, 1925, it was noted that the X-ray looked very much like the hip was the seat of a tuberculous process but there was no muscle spasm and there was not the atrophy that one would expect if the condition were due to disease. Cast left off for a while but crutches continued. July 11, 1925, light cast applied and crutches continued. October 3, 1925, there seemed to be more softening and flattening but no pain and no muscle spasm. To increase fats in diet was given cod liver oil with phosphorous. December 12, 1925, blood chemistry showed phosphates 3.9 mg. per 100 cc; calcium 11.8 mg. per 100 cc.

January 23, 1926, X-ray showed beginning calcification and increased density of the head and neck. Cast removed. March 27, 1926, X-ray showed marked improvement in the bone density; patient walking with one crutch. May 1, 1926, walking without pain or discomfort; has a slight limp. The right leg presented free and complete range of motion with very little shortening. In fact the two legs seemed identically the same in length, size, shape and function. X-ray showed nearly normal bone density. (Fig. No. 3, Case 1.) He has gained and grown normally for past 18 months.

Case No. 2. Robert B., 10 years old. First seen October 24, 1924. His father gave the following history: That the boy had always been well and had never received an injury of note. Some time last spring, he thinks it was in May, when the boy was running from the field to the house, he developed a pain in the left hip. He had two or three osteopathic treatments and the pain disappeared, but the limp persisted. About three months ago he again complained of pain for a few days, and since then the limp has been more marked. He eats and sleeps well and has no complaint other than of limping. He has one brother and one sister, both older and well, none dead.

On examination at that time he was a well developed, well nourished chap, weighing 80 pounds and looked a picture of health. His examination was entirely negative except for his left hip which presented complete extension and adduction. Flexion was

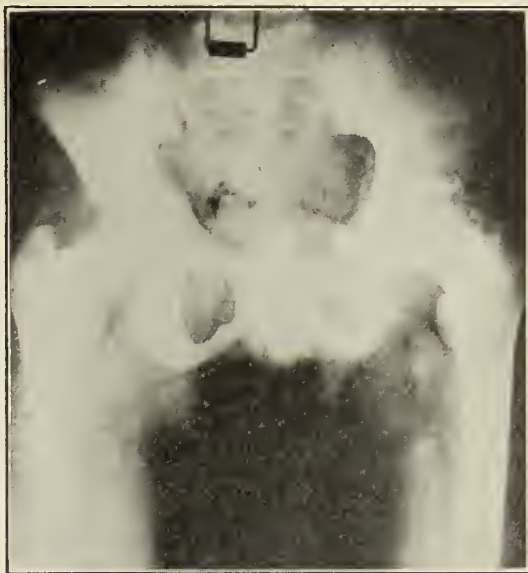


Fig. 6, Case 2. Normal bone density. Note deformity of head and acetabulum.

limited to about 90 degrees, and abduction was limited to the neutral line; rotation was also slightly limited and the trochanter seemed somewhat prominent. The left leg measured the same length as the right one and there was no appreciable atrophy of the leg and thigh. There was no muscle spasm and he complained of no tenderness or soreness. His blood chemistry was reported normal.

The X-rays at that time showed a very definite epiphyseal slip of the neck of the femur, the head being slightly higher than the neck and there was marked rarefaction of the neck and great trochanter and possibly a beginning coxa vara. (Fig. No. 4. Case 2.)

He was sent into hospital and on October 25, 1924, was given an anesthetic and the hip completely abducted, rotated in and cast applied, which was changed three months later, at which time the X-ray showed more rarefaction along the epiphyseal line but there had been no decrease in the angle of the neck. (Fig. 5. Case 2.) He continued to wear casts with a high shoe and to use crutches for about 10 months, when the cast was removed but the crutches continued for two months longer. The last X-rays made in November, 1925, or 13 months after he was first seen, showed a deformed head and acetabulum, but practically normal bone density. (Fig. No. 6. Case 2.) Since then he has been going about normally, and his father reported to me yesterday that he practically never complained of pain, but that he had a definite slight limp. His older brother, who is 14½ years old, was in my office yesterday for the first time complaining of a left limp since January, last, and a backache after walking. His left leg presented one-fourth inch shortening; no atrophy of thigh or calf. His hip flexion and extension were normal but abduction was limited to about 10 degrees; adduction slightly limited, as was rotation. He was well developed and nourished, weighing 105 pounds. His X-ray (Fig. No. 7) shows a flattening of the head of the femur with roughening of the acetabulum and some thickening of the neck but not much change in the angle. There is marked rarefaction of the neck and of the acetabulum, especially above the brim.



Fig. 5. Case 2. Marked rarefaction of neck. Head appears as a sequestrum.

These two cases are of particular interest to me as I have never before observed similar developmental deformities in brothers. It is also worth noting that it was the left hip in each boy.

CONCLUSIONS

1. Early diagnosis can not be made definitely in cases of hip joint affections occurring in children around 10 years of age, but the ab-



Fig. 7. X-ray of the brother of Case 2. Shows a roughening of the acetabulum and thickening of the neck and marked rarefaction.

sence of local and constitutional symptoms should suggest that the condition is not the result of disease.

2. Frequent X-ray pictures are necessary in obscure cases as this is the only way a conclusion can be reached. To mistake a nontuberculous hip for a tuberculous one subjects the child to a long period of unnecessary treatment.

3. It is my opinion that the above described cases represent atypical Legg-Calvé Perthes condition, properly termed osteochondritis deformans coxae juvenilis; that the etiological factor is the same as in the typical cases, which is now considered as developmental, resulting from some mechanical cause rather than from infection; that the difference in the X-ray appearance of the joint is due to the fact that these cases are older when the disturbance begins.

Argyle Building.

THE TREATMENT OF TUBERCULOSIS OF THE HIP*

J. ALBERT KEY, M.D.

ST. LOUIS

In treating tuberculosis of the hip, we attempt to restore the patient to a condition of sound general health and to equip him with a stable, painless hip which is useful and is

reasonably safe from a recurrence of the local disease.

There are wide differences of opinion as to what is the ideal treatment, and the multiplicity of methods used by different orthopedic surgeons is ample evidence that at present we have no standard treatment which can be depended upon to give satisfactory results. In this paper I shall pay little attention to what I consider the ideal treatment, but shall emphasize the fact that the treatment must in most cases be modified to fit the economic condition of the patient, and shall endeavor to tell you how the cases are actually handled in private practice and in our free clinics. It matters little what we believe should be done; the important thing is what we actually do for these patients. As the program which I shall outline will no doubt seem to some of you to be extremely radical, I shall endeavor to justify my position by a brief consideration of the natural course of the disease and the end results of so called conservative treatment.

Tuberculosis of the hip is a destructive process which tends to progress at a variable rate over a period of years and then becomes quiescent. Without treatment the joint is more or less completely destroyed and the limb becomes fixed in a position of deformity, usually flexion, adduction, and internal rotation. Ankylosis by bone rarely occurs, but as the disease quiets down the area is surrounded by rather dense fibrous tissues which limits motion in the joint and walls off the disease. Such a hip is subject to strains and periods of pain,

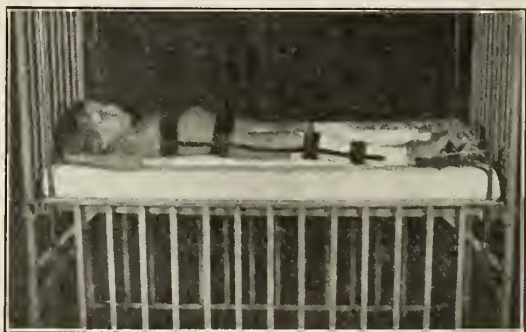


Fig. 1. Case 1. In traction on Bradford frame with a long lateral splint to immobilize the hip.

and is always a source of danger as it usually contains living tubercle bacilli which may at any time begin to multiply and result in active disease. A certain number of the patients succumb to secondary infections or to other forms of tuberculosis. Those who survive the years of pain and infection are severely crippled.

The above brief but gloomy picture of the natural course of the disease is by no means

*Read at the 69th Annual Meeting of the Missouri State Medical Association, St. Louis, May 17-20, 1926.

exaggerated. Because we now know that many of the conditions which were formerly regarded as tuberculosis of the hip are really nontuberculous conditions which tend to pursue a mild course and heal with good function, it is not possible to determine the end results of the treatment of tuberculosis of the hip from any of the published statistics. It is even difficult to state how much we can influence the course of the disease by the methods of treatment which we employ. However, I believe that conservative methods of treatment will decrease the pain, improve the general health, lessen the mortality, decrease the number of abscesses and sinuses, lessen secondary infection, prevent or correct deformity, lessen the period of the active disease, and decrease the amount of destruction.

But the older statistics indicate that many patients recovered with hips which were stable, painless, freely movable, and safe from recurrence of the disease and, from what I can learn, many physicians who are not especially interested in orthopedic surgery still believe that such a result can be expected in the average case of tuberculosis of the hip, if it is diagnosed early and treated properly. It is high time that the profession at large realize that a hip which has once been infected with tuberculosis can never be restored to anything approaching a normal joint, no matter how early the treatment is begun nor how faithfully it is carried out. At least I have never seen such a result in a hip in which I was willing to accept the diagnosis of tuberculosis. Our average end results in the past have been hips which retained a few degrees of motion, were in a position of moderate deformity, were occasionally painful, and were not safe from a recurrence of the disease. Our best results have been hips which were firmly ankylosed in a good functional position. Such hips are stable, useful, painless, and safe from a recurrence of the disease.

The end results have been obtained only after years of treatment in whatever hospitals were available, or at the patient's home. It is undoubtedly true that in special heliotherapy hospitals the disease can be arrested more quickly and the amount of destruction will be less. But most of our patients cannot afford the expense of a prolonged stay in such an institution, and there are very few localities in this country where such treatment can be secured without cost, even were the patient an object of charity.

I do not believe that the economic side of surgical tuberculosis has been sufficiently stressed by the advocates of conservative treatment. It is freely admitted that such cases



Fig. 2. Case 1. Right hip on admission.

should have hospital care and that the treatment should be uninterrupted until the patient is cured. At the Shriners' Hospital, our per capita cost last year was \$3.58 a day. This means that it costs the Shrine \$1306.70 to maintain a single patient in the hospital for a period of one year. Our tuberculous patients get heliotherapy whenever it is available, and quartz lamp therapy in inclement weather, but by conservative methods we have not been able to cure tuberculosis of the hip in one year or even two years. I believe that with the average case it would be close to four years before it would be safe to permit the patient to return to his home. This means that each tuberculous hip treated by conservative methods would cost the Shrine over \$5000, and as our average turn over is about 90 days, it means that every case of tuberculosis of the hip which was treated over a four year period would prevent 16 other crippled children from receiving the benefits which the hospital could give them. And even then most of these patients would not have hips which would be as safe and useful as are hips which are ankylosed in good position.

We have come to believe that as soon as the diagnosis of tuberculosis of the hip is definitely made, the surgeon should direct his treatment towards securing bony ankylosis of the affected joint in a good functional position (flexion

20° to 30°, abduction 10° to 15°, and rotation 0°). The difficulty is that tuberculous bones show little tendency to unite and it is very difficult, especially in children, to secure a firm bony ankylosis of the hip, even by operation.

In our treatment of tuberculosis of the hip we have been accustomed to make a sharp distinction between adults and younger patients.



Fig. 2A. Case 1. Right hip about 2 years later. The patient has been under active treatment during the entire period but considerable destruction of the joint has occurred.

In our adult cases we recommend an arthrodesis as soon after the diagnosis was definitely made as the patient could be gotten ready for the operation, but in children and adolescents we recommended conservative treatment. Of recent years we have been gradually extending the field of arthrodesis of the hip until now we recommend it for all adolescents and many older children. I believe that the extension of arthrodesis to include younger children will be limited only by the limitations of our operative procedure. At present the youngest patient upon whom we have performed an arthrodesis of the hip for tuberculosis was nine years of age. In other words, as soon as the surgeon feels that he can be reasonably certain of obtaining bony ankylosis by operation, he will, in the majority of instances, decide to operate as soon as the patient can be gotten ready for the operation. By "gotten ready for the operation" we mean that the patient's

general health must be such that he will be able to survive one of the severest of surgical procedures, and that the local disease must be quieted down to such a degree that there will be a reasonable chance of obtaining bony union at the joint.

The general treatment of patients with tuberculosis of the hip does not differ from that of patients with other forms of surgical tuberculosis. All patients should have the maximum amount of heliotherapy obtainable, high calorie diet, plenty of fresh air, good nursing care, and general hygiene. The local treatment consists of freedom from weight bearing, immobilization of the involved joint, and prevention of deformity. If deformity is present it should be corrected, preferably by traction. Cold abscesses are at first left alone, but if they continue to enlarge and it is apparent that they will eventually rupture, they should be evacuated through a small incision and the incision should then be closed. If the abscesses appear to be secondarily infected they should be drained. Sinuses are usually dressed with sterile gauze or mild antiseptics, but occasionally we excise old indolent sinus tracts.

Given an early case of tuberculosis of the hip in a young child, what is the ideal and what is the practical treatment? Undoubtedly, the ideal procedure is to send the patient to a special open air hospital where heliotherapy is the dominant therapeutic procedure, and leave him there until he is discharged with the disease arrested. The case reports from such hospitals leave no doubt in my mind but that heliotherapy and open air treatment are most effective when they are carried out in institutions especially designed for the purpose and in which practically every case admitted is given the same type of treatment. Theoretically, the treatment can be given in any hospital or even at home, but practically, the results are inferior to those reported from the heliotherapy institutes of Rollier and others.

However, only the exceptional case can obtain the prolonged and uninterrupted care in a special hospital which is necessary for the ideal treatment. What are we going to do with the average case? Here the parents are in moderate or restricted circumstances and maintenance of the patient in an expensive private sanitarium over a period of years is out of the question. Likewise, our charity hospitals cannot devote their beds to the prolonged care of a few such patients and turn away dozens of other deserving patients who can be relieved of their disabilities and returned to a normal life after a few weeks treatment.

The way such patients are handled is as follows: When first seen the hip is acutely sensi-

tive and is in a position of moderate deformity. The patient is admitted to a private or a charity hospital and traction is applied with the extremity supported in the position of deformity. As the acute symptoms subside, the deformity is gradually corrected by bringing the extremity down to the neutral position while the traction is maintained. When the hip is in the desired position, a lateral splint (Fig. 1) may be applied to immobilize the joint while the traction is maintained. The traction and heliotherapy are continued as long as the patient can be given hospital care, as these patients do better under this regime than they do when immobilized in plaster of paris. When for any reason hospital treatment must be discontinued, a long plaster spica is applied and the child is sent home, and the case is followed by visits or in the out-patient department of the hospital. When the parents take the child home they are given specific directions in regard to heliotherapy, high calorie diet, and general hygiene of the patient.

Instead of the above method the surgeon may apply a plaster spica without a preliminary period of traction and gain a little correction of the deformity with each new application of plaster. In other instances he may put the child to bed at home with traction, and by frequent visits or a special nurse, supervise the treatment personally. Patients in bed traction at home demand a good deal of inspection of apparatus and nursing care. The traction may be applied by means of a Jones splint or by putting the patient on a Bradford frame and using a Thomas splint or Buck's extension.

Of the above methods of extra-hospital treatment the plaster spica is the simplest and is about the only method by which out-of-town patients can be handled. A Jones splint, if properly fitted, admits of transportation, but requires considerable nursing care. The disadvantages of the plaster spica are that it limits the area of the body which can be exposed to the sun and does not admit of traction on the hip. However, by merely including the crests of the ilia and cutting the plaster low over the abdomen, one can practice fairly efficient heliotherapy and at the same time get quite satisfactory immobilization of the hip, though a slight amount of abduction may be lost. As regards traction, from what we know of the pathology of joint tuberculosis, I am inclined to believe that contact of the cartilage surfaces is not harmful.

PROGNOSIS

What is the prognosis under such a course of treatment? This depends partly upon the resistance of the patient and partly upon the

home conditions and the efficiency with which the heliotherapy is carried out. With moderately good home conditions and good cooperation as regards heliotherapy, one may expect in the course of two to four years that the disease will be arrested and that the hip will be in a good functional position with from 10° to 45° of motion in flexion and extension. The

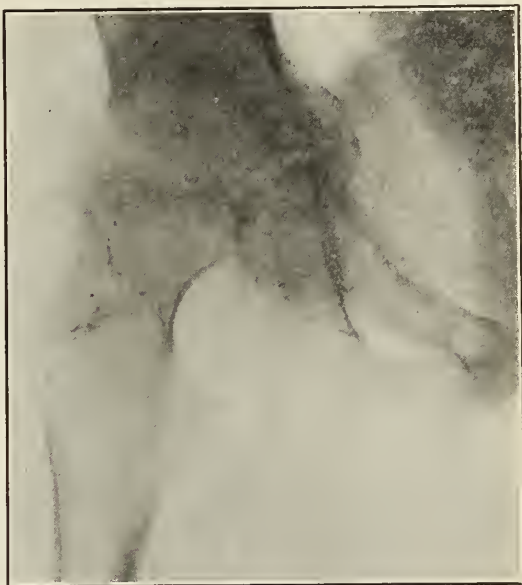


Fig. 3. Case 2. Left hip on admission.

cartilage of the joint will probably be destroyed and the thickened fibrosed capsule will limit joint motion. There will be some destruction of the head of the femur or of the acetabulum or of both. There may have been one or more abscesses formed during the course of the disease. The following is a fair illustration of the progress of a case.

REPORT OF CASE

Case 1. W. H., age 3, admitted 5-30-24. P. I. About a year ago the patient began to limp occasionally. Seven months ago he suddenly complained of severe pain in the right knee and had several chiropractic adjustments for the condition. As there was no improvement he was taken to a physician and was given a series of ten injections and a brace was applied. He has worn the brace continuously.

P. E. Emaciated child with an acutely sensitive hip which is fixed by muscle spasm in flexion, adduction, and internal rotation. The X-ray showed bone atrophy and haziness of the joint, but no destruction. (Fig. 2.)

Treatment. Traction and heliotherapy four weeks, then a plaster spica was applied and the patient was sent home with specific directions for heliotherapy, diet, and general hygiene.

The family was fairly cooperative and he was followed in the out-patient for nine months, but as he was slowly losing ground he was readmitted 4-22-25, and has been in bad traction since that time. An ab-

cess developed while in traction and was evacuated and sutured on 8-20-25, but later a sinus formed. At present he is doing fairly well. The general health is good. There is a small sinus on the thigh which drains a few drops of pus daily. The X-ray (Fig. 2 A.) of the hip shows some laying down of new bone, but the disease is not arrested. A considerable amount of destruction has occurred while this patient was under treatment.



Fig. 3A. Case 2. Left hip one year later. Considerable destruction has occurred in spite of continued traction and heliotherapy.

Under less favorable conditions, there will be extensive destruction of bone, perhaps many draining sinuses with secondary infection, marked shortening, and severe deformity with the disease remaining active for an indefinite period. In certain instances, of course, the patient may die from amyloid disease, secondary infection, or tuberculosis.

Immobilization and freedom from weight bearing should not be discontinued until the surgeon is reasonably sure that the disease is arrested. The determination of this point is always difficult and is never certain until after the hip has been used for some time and no recurrence of symptoms has been noted. Cessation of destruction and evidence of deposition of the bone, shown by X-ray examination, disappearance of sinuses, abscesses, and edema, and lack of tenderness and pain on axial pressure or movement of the hip, are all evidence of arrest of the disease.

Three months after the disease is believed to be arrested one may have the patient begin to get up. Here again the surgeon must decide whether he wishes to protect the hip from weight bearing or motion or from both. The

safest procedure is to protect from both in the beginning. This is accomplished by putting a shoe with a cork sole or a patten on the sound limb. This raises the shoe from four to six inches and prevents the toe of the affected side from reaching the ground. Then the patient is gradually taught to walk on crutches.

If all goes well and no pain or other symptoms appear in the hip after three months of ambulatory treatment without weight bearing or motion, one may then gradually let the patient begin to bear weight on the limb or to attempt moving the joint. Immobilization with weight bearing can be obtained by removing the lift on the shoe of the sound foot, applying a plaster spica to the middle of the leg, and permitting the patient to begin to walk. If there is no evidence of active disease after three months, the plaster is applied to the thigh only and the motion in the knee is gradually restored. Surgeons who fear weight bearing more than motion are accustomed to use one of the hip traction splints at this stage. A Bradford abduction splint, a Thomas caliper splint, or a Taylor hip splint can be applied with traction and permit a certain amount of motion.

Personally, I do not believe that one should ever attempt to obtain motion in tuberculous hips which are being treated outside of special heliotherapy institutes. The surgeon should endeavor to arrest the disease and allow the hip to heal in a position of good function. If mobility develops later the motion should be accepted with a certain amount of suspicion, because a tuberculous hip which is movable is always a source of danger.

TREATMENT AT 10 YEARS AND OLDER

If the patient is not well on the road to permanent arrest of the disease by the time he is ten years old, then the plan of treatment should be radically changed and the surgeon should aid nature in arthrodesing the joint. In patients who are ten years or older when they first come under observation, the surgeon should make the diagnosis with great care and as soon as the diagnosis is certain he should direct his treatment towards preparing the patient for an arthrodesis of the hip. The age of ten is used as an arbitrary standard because, by a method which will be described in detail below, it seems that one can be fairly certain of obtaining bony union at the hip in patients of this age or older. I believe that within a few years we shall be operating upon younger patients.

Given then, a boy ten years of age or older or a pre-senile adult in whom there is definite tuberculosis of the hip, what is the ideal and what is the practical treatment? In these cases

the ideal treatment again is admission to a special heliotherapy hospital. However, the conditions on which the patient enters the hospital are somewhat different. In the case of young children with unrestricted means, the patient enters the hospital with the expectation that the child will remain there until he is cured by non-operative treatment. In the case of older children or adults the patient is sent to the hospital as a preliminary to operative treatment. Of course, if the patient responds unusually well to the treatment and appears to be well on the road to recovery within a year after admission, no one would advise operative interference.

But, even with unrestricted means, I would not advise a prolonged hospitalization for a boy or girl over ten years of age or for an adult, with the hope that an operation may be avoided and that the hip may retain some motion. After all, stability is the chief function of the hip and it is very doubtful if the amount of motion gained would be worth the necessary years of life at either a formative or a productive age. In such hospitals every attempt is made to avoid the hospital atmosphere and, personally, I would much prefer that my own children be reared in a more normal environment. In adults the disadvantage of prolonged hospitalization is obvious and needs no comment.

Having then decided that the ideal treatment in older children and adults is nearly always operative, what are we to do about the ones in moderate or reduced circumstances? Here the need for operation is more urgent because the expense of prolonged hospitalization cannot be borne by the patient or the family or the community. These cases cannot be sent to distant expensive private sanitariums; they must for the most part be treated in or near the state in which they live. Their stay in the hospital must, of necessity, be as short as possible.

Given an acute case with little or no destruction of the bone and only moderate deformity, the indications are to correct the deformity, build up the patient's general health and resistance, and then as soon as the acute symptoms have quieted down, arthrodesis the hip.

Here again the mode of treatment depends upon the patient's circumstances. In the average early case in private practice the deformity can be corrected by a short period of traction in a hospital or by a gentle manipulation under anesthesia. As soon as the deformity is corrected the hip is immobilized in a long plaster spica, and intensive heliotherapy and open air treatment, preferably at home, is begun. As soon as the patient is well tanned

on the exposed parts of the body and the pain, tenderness, sensitiveness, swelling and edema around the hip have disappeared, he should re-enter the hospital for arthrodesis.

In the case of charity patients, conditions are different. These patients, if sent home in plasters spicas for high caloric diet, heliotherapy and open air treatment, often go rapid-



Fig. 4. Case 3. On admission. Tuberculosis of the hip active over a period of ten years.

ly down hill. No matter how definite the directions and how voluble the promises of the family, the treatment is often ignored and the patient is simply fed with the rest of the family and given very little nursing care. As a matter of fact, often it cannot be otherwise, as the family is already overburdened or the patient would not be a charity case. Of course, there are many instances in free clinics where the families are cooperative and where the patient can be sent home in a spica for building up and heliotherapy. If this seems to be probable, the case should be treated as would a private case in moderate circumstances. If there is apparently no possibility of cooperation at home or if having tried the case with home treatment and had the child brought back to the dispensary febrile and emaciated and in a cast which is broken or extensively soiled with urine and feces, then one must admit the case to whatever hospital is available with the hope that within a few weeks or months one may be able to get the patient ready for operation.

The following case illustrates how difficult it may be to get some of these patients ready for an arthrodesis.

REPORT OF CASE

Case 2. M. K., age 9, admitted 5-22-25. P. I. Onset two years ago following a fall while roller-skating. The pains persisted and were thought to be growing pains. Five months ago the patient was taken to a hospital and traction was applied. She has been in traction continuously since that time. Because of lack of funds she is being transferred to this hospital.



Fig. 5. Case 3. Right hip on admission.

P. E. Pale emaciated girl with an acute left hip which is held in moderate flexion and adduction. The X-ray (Fig. 3) shows atrophy of bone and narrowing of the joint space.

Treatment. She was immediately put up in traction and given heliotherapy and a high calorie diet.

Sept. 14, 1925. An abscess in the left buttock was incised, evacuated, and the wound sutured.

January 30, 1926. A large abscess which had rapidly developed in the left thigh was incised and drained.

Present condition. The disease is still active and the sinus is draining a moderate amount of pus. The patient is under weight and is in no condition to stand arthrodesis of the hip. The X-ray (Fig. 3 A) shows the considerable amount of destruction which has occurred during the ten months of treatment in this hospital.

Of necessity, one's standards cannot be quite as high in such cases as they would be in cases

where adequate pre-operative treatment is obtainable. On the other hand, it is wise not to attempt arthrodesis on cases of fulminating tuberculosis with fever, great local swelling and heat, rapidly increasing abscesses, and progressive loss in weight. In such cases the tissues around the joint are widely infiltrated with the disease and the patient's resistance is low. Operation for arthrodesis of the hip is one of the most serious procedures in orthopedic surgery, and to perform it on such a patient is to court disaster.

However, free beds in the average charity hospital cannot be occupied indefinitely by one patient. In fairness to the community and to the patient, the patient will be given every possible aid in hastening the day when it is reasonably safe to operate upon him and then, often with a certain amount of misgiving, it is true, the surgeon will undertake the operation. In this instance he is pushed into performing the operation by circumstances which are beyond his control; in the other cases where adequate pre-operative treatment is obtainable, the surgeon operates from choice as a definite part of a well planned course of treatment.

In either case the operative procedure is the same. The hip has been put in approximately the position in which it is expected to obtain bony ankylosis and this position is maintained in a plaster spica or by traction. The patient is in the hospital or enters the hospital preferably at least three days before the operation and the cast is bivalved and the hip examined. If all seems well and it is decided to go ahead with the operation, the entire limb and corresponding buttock and side of the abdomen are given a two day preparation and the patient is put on a high carbohydrate diet, with orange juice and sodium bicarbonate. As the breakfast is omitted, the operation should be performed as early in the morning as is practicable and during the operation, normal saline should be given subcutaneously.

As it is notoriously difficult to obtain arthrodesis in tuberculous hips, I have devised the following procedure which offers, I believe, a fair chance of success. It consists of a removal of the cartilage from both joint surfaces, fitting of the bone surfaces, excision of the synovial lining, freeing of the margin of the acetabulum and bridging of the joint space by a series of osteoperiosteal grafts which are inserted into a groove above the acetabulum and are in contact with raw bone on the femur. As a further aid to bony union the trochanter is cut off and fitted down over the grafts. As the danger period in hip operations does not begin until the capsule is opened the grafts should be cut before the hip is touched.

OPERATIVE TECHNIQUE

Cutting grafts. A long slightly curved incision is made over the inner surface of the tibia and the periosteum is exposed for a distance of about two thirds of the length of the shaft. With a bone knife, two long parallel incisions are made in the periosteum about one fourth of an inch apart. Then with a narrow curved gouge, a long thin graft is cut from the bone. The graft includes the strip of periosteum between the long cuts. Three or four such grafts are cut from the tibia. They are then cut, with heavy scissors, into pieces about one and one half inches long and put in a moist chamber until needed. An assistant sutures the wound in the tibia while the surgeon in charge exposes the hip.

Hip incision. The incision used is the superolateral approach described by Smith-Peterson. It consists of a vertical skin incision extending down from the anterior superior spine 5 to 7 inches and a posterior limb which curves backward about one half inch below and parallel to the crest of the ilium. The dissection of the vertical limb is carried down through the fascial plane between the sartorius and the tensor fascia femoris and follows the anterior border of the ilium to the anterior inferior spine. Its lower portion is carried down to the shaft of the femur, and just below the level of the trochanter it is usually necessary to ligate one or two medium-sized vessels. The posterior limb is carried down to the bone and the periosteum is reflected from the lateral portion of the ilium. The incision is modified to the extent that the trochanter is cut across at its base and is reflected back with the flap. The flap includes the tensor fascio femoris and anterior parts of the gluteus medius and minimus.

The thickened capsule of the hip lies at the bottom of the incision. Before the capsule is opened the surgeon should ligate all bleeding points, cover the raw flap with skin towels, and assure himself that the exposure is adequate for a rapid and thorough operation in the joint. If the exposure does not seem to be adequate, the head of the rectus is removed from the anterior inferior spine and reflected inward, thus gaining more room in that direction.

The capsule is then opened by a long incision parallel with the neck of the femur and at the acetabular margin a cross incision follows the line of the glenoid cartilage and the two edges are reflected. A similar cross incision may be necessary around the femoral neck. The thickened capsule always bleeds profusely and must be clamped with heavy Kocher clamps. The

diseased synovial lining of the capsule is then removed by sharp dissection with the knife.

After the capsule is reflected, a deep groove is cut in the ilium around the upper half of the margin of the acetabulum. This groove is cut by simply driving a chisel obliquely into the bone and prying it upward so that the overhanging edge remains in place.

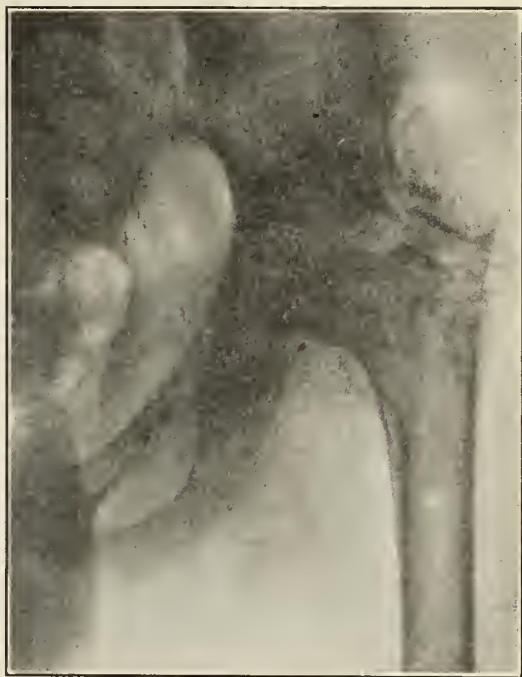


Fig. 5A. Case 3. Right hip 5 months after arthrodesis by the method described. Note the new bone forming between the top of the neck and the margin of the acetabulum.

The diseased cartilage and bone are now removed from the acetabulum and the head of the femur with a large gouge, and the bones are so shaped that when the limb is abducted as large areas of raw bone as possible are brought into contact. It may be necessary to disarticulate the head in order to remove the diseased bone, but this should not be done if it can be avoided, and the hip should not be manipulated any more than is necessary because such manipulations are often very shocking to the patient.

Having removed as much of the diseased bone and joint lining as can be gotten at easily (the inferior capsule is not accessible without disarticulation and is consequently ignored), the periosteum is raised from the upper half of the inner end of the neck of the femur and the limb is abducted, thus forcing the stump of the neck into the denuded acetabulum.

With the limb supported in abduction, six or eight of the short osteoperiosteal grafts are

tucked in around the joint so that one end of the graft is in the groove in the ilium and the other end is in contact with the denuded portion of the neck of the femur. Other grafts are inserted wherever there seems to be a place for them and the trochanter is then brought over and sutured lightly on top of the grafts and between the reflected edges of the capsule.



Fig. 6. Another patient arthrodesed by the same method. Walking plaster with lift on the shoe. Eight months after operation.

The wound is closed in layers and a large plaster spica is applied without changing the position of the limb. The spica includes the opposite thigh. It is worn for six months and then a single spica to the ankle is applied and the patient is started walking. This should be worn three months, then a short single spica for three months, and at the end of a year, if the operation is successful, all apparatus may be discarded.

The following case illustrates the management of an old case of tuberculosis of the hip in which there was considerable deformity. The method of correcting the deformity by skeletal traction has been described by Dr. L. C. Abbott and will be published in the near future.

REPORT OF CASE

Case 3. V. C., age 12, admitted 6-30-25. Tuberculosis of the hip developed at two years of age and he has been lame since. No pain at present.

P. E. The hip is in a position of 70° flexion, 30° adduction and slight internal rotation. There is marked shortening. A few degrees of motion are present and there is no pain or tenderness.

Treatment. Adhesive traction and heliotherapy. An abscess was noted in the right buttocks 8-2-24. Operation 8-6-24. The abscess was incised and curetted and the wound was closed. A Steinman pin was inserted in the lower end of the femur and 40 pounds traction was applied.

9-27-25. The deformity had been corrected by the traction. The pin was removed and the patient prepared for operation.

Operation 9-29-26. Arthrodesis of the hip by the method described above. At the operation a small abscess was found in the thigh and the joint cavity contained pus.

Spica changed 2-4-26. X-ray (Fig. 5 A. Case 3) shows beginning of what appears to be union.

Discharged home 3-5-26 in a plaster spica wearing a lift on the sound shoe and walking on crutches.

Readmitted for a change of plaster 4-17-26. Clinically the hip is firmly ankylosed. The X-ray shows what appears to be union between the top of the neck and the ilium. There is no evidence of active disease.

It is, of course, too early to say what the end result will be in these cases, but they seem to be getting a bony ankylosis.

Occasionally we see an old tuberculous hip in which the disease appears to be arrested and in which there is very little motion at the joint. In these cases the deformity is the chief cause of the disability and we do not perform an arthrodesis but correct the deformity by a subtrochanteric osteotomy and hope that the disease will not again become active.

CONCLUSIONS

1. The best result obtainable in tuberculosis of the hip is a firm bony ankylosis of the joint with the extremity in a good functional position.

2. Treatment should be directed towards obtaining an ankylosis of the joint in the desired position.

3. In young children the treatment must be conservative.

4. With our present methods a certain amount of destruction of the joint must be expected to occur while the patient is under treatment.

5. In children over ten years of age and in adults, ankylosis should be attempted by operation.

6. Before the arthrodesis is performed the patient should be built up by heliotherapy and diet, and the hip should be put in the position in which it is desired to obtain ankylosis.

7. A technique for performing an arthrodesis by the aid of osteoperiosteal grafts is described.

Shriners' Hospital for Crippled Children.

DISCUSSION

DR. M. L. KLINEFELTER, St. Louis: These were two excellent papers, dealing with very live and pertinent subjects. Beginning with Dr. Key's paper, I feel that practically all of us who have had much

experience in treating an established tuberculous hip, that is a tuberculous hip where disease is pretty well determined, have met with failure in a great percentage of cases, even if they are taken fairly early. It is true that a great part of this destruction can be avoided if it is treated properly. But, I believe that where the diagnosis of tuberculosis of the hip is established the sooner we ankylose the case the better will be our final results, unless it is a comparatively young child. That is a very serious procedure and whilst the method Dr. Key has described seems very attractive, I am inclined to believe that the more nearly the operation is extra-articular the safer is the operation, and particularly the less danger of military tuberculosis.

I should like to ask Dr. Francisco, if I understood him to classify the group of cases he reported as Perthes' disease.

DR. FRANCISCO: Atypical ones.

DR. KLEINFELTER: In going to the other extreme. We have a class of cases that come in with hip symptoms and most of them come under the group covered by Perthes' disease. Dr. Francisco said that it was pretty well established that there were mechanical circulatory disturbances and I believe that is true in a large percentage of cases. But, if we are going to consider a flattening of the epiphysis as Perthes' disease during this growing period, certainly trauma to the epiphysis must play a part. I believe infectious conditions of low grade nature cause segmentation of the epiphysis and a flattening of the bearing surfaces of the epiphysis and therefore we have numerous causes for the so called Perthes or Legg disease.

As to there being symptomless after a period of time, I agree with Dr. Francisco there thoroughly, for I see a great many of these patients six months or a year after they have been treated and they are practically free from hip symptoms, as he nicely described, some loss of motion in certain directions but not painful. However, if you take them twenty or thirty years later (not that I follow them that long) certainly a great many of them have resulted from similar conditions, and they become painful as a result of the development of osteoarthritis. These epiphyseal separation cases, I believe belong to a separate and distinct group; they are severe cases.

A certain percentage is probably influenced by infections, a certain percentage by endocrine disturbances and practically all of them give a history of slight trauma. These epiphyseal separation cases certainly should be reduced and immobilized. The other infectious hips, those of a nontuberculous nature, should be treated by traction, with or without drainage, as indicated; and should not be absolutely immobilized.

DR. R. MCE. SCHAUFFLER, Kansas City: The cases which Dr. Francisco has presented are typical cases of Legg's disease, and I will emphasize the fact that quite a group of cases occur about the time of puberty. If you remember, Legg described them primarily as occurring about the age of five years or under. There is such a distinct group past the rickets age but quite early in childhood. Then there is another very distinct group coming on about the age of puberty—not due primarily to trauma. Every once in a while there is one that is a true epiphyseal slip. These are like a malunion in a fracture. After the union is accomplished there is practically no change in the following months or years, although later in life there may be a further distortion due to the stress of use at a mechanical disadvantage. The true Legg's disease is a sort of temporary localized osteomalacia. With these there is the greatest possible variation; some have just a little thickening

around the neck and a little flattening of the head, but in a few months harden up again, the patient taking a very small loss with a trifling deformity. It does not make any difference what you do with them. There are other cases that progress even if you protect them very carefully and they take a considerable loss and get deformity of the hip, although they tend to recover in the end, somewhere between nine months and a year and a half or two years. So it is very difficult to make a prognosis and very difficult to check up your treatment.

This much you can say about it: They should have less use and less weight to carry and they should not have the limb kept perfectly still. It will mold itself better and will get well quicker, in my opinion, if it is not confined too strictly in plaster. You must see the patient every month and take frequent X-ray pictures. In one case you may have to keep weight bearing off that foot, but allow regular exercises lying on the back. There is no question in my mind that if the bone is flooded with blood by exercises there will not be so much atrophy as when it is strictly immobilized. Other cases you allow to walk under supervision a little while each day and the rest of the day, when they are out of the mother's sight, you have them in some kind of apparatus in which they do not bear weight. The less severe types can be allowed to bear weight in walking but not run or jump. Legg himself said he didn't see any difference between those treated in casts and those receiving no treatment. I do not agree with this, but the particular amount of protection from weight bearing which we have to enforce in a particular case cannot be told in advance, and the case must be watched and varied according to circumstances.

Dr. Key's conclusions in his excellent presentation of the problem of tuberculosis are justifiable. The discouraging outlook in tuberculous hip is familiar to everyone of much experience. Notice how pitiful the story is, and how at times they get worse right under our very eyes when we are doing everything we can for them. Dr. Key seemed to me to say when he started out that the desire was to get a painless, movable, safe joint, but I don't think he could have meant that, because his illustrations show that he got an anklosed joint just as soon as possible, which is the logical thing to do.

I am much interested in his method, and I would like to ask him, if he closes the discussion, whether he has tried the Hibb's method of detaching the trochanter, turning it up on a sort of leather hinge of soft parts and inserting it in a pocket excavated in the ilium close to the acetabulum. Did he discard this on account of its technical difficulty? The operation which he presented seems to be simpler, shorter and, in at least some of the cases, equally efficient.

DR. KEY, in closing: I agree with Dr. Klinefelter that an extra-articular arthrodesis is the ideal procedure, but the only methods in the literature are those of Albee and Haas. Albee used two tibial grafts from the trochanter to the ilium. We know nothing of his results and the method has not been generally adopted. Haas used the trochanter to bridge the space between the head and the rim of the acetabulum. My operation resembles that of Haas except that the osteoperiosteal grafts are used and the trochanter is only shifted inward.

In regard to Dr. Hibb's operation, I have not mentioned it because it is not yet published and its use has been, I believe, confined to his clinic. The results which he presented in April, 1926, in Atlanta were the best that I have seen.

SOME POINTS IN THE DIAGNOSIS OF BRAIN ABSCESS

REPORT OF CASES

O. JASON DIXON, M.D.

KANSAS CITY, MO.

In spite of the remarkable advance in brain surgery which has been brought about by such men as Cushing, Sachs, Bagley, Eagleton, Sir Willima McEwen and others, we still had in 1922 a mortality rate of 75 per cent. for brain abscess. When we compare this enormous mortality with McEwen's series of eighteen recoveries out of nineteen patients operated upon, it can be readily seen that we have made no advancement in the early recognition of this disease.



Fig. 1. Case 1. Photograph taken 16 hours after drainage of the brain abscess. Patient voluntarily looking to the left.

Bagley has aptly said that the fear of the presence of a brain abscess frequently prevents the physician from facing the unpleasant situation until the appearance of grave symptoms. In one way a brain abscess offers the surgeon more than any other pathological lesion because we know that they are always fatal if unoperated. There is no organ in the human body that can conceal its trouble so carefully as a brain which harbors an abscess. Nor is there a pathological lesion that explodes with such sudden and fatal results.

Eagleton has compared a patient with a brain abscess to a hibernating animal, in that the patient has a subnormal temperature, tachycardia, slowed respiration with diminished output of carbon dioxide, lowered blood pressure, relative peristaltic activity and marked insensibility to painful and emotional stimulus.

It is no wonder that we so frequently fail in the early recognition of the vague yet important

symptoms. We diagnose disturbances elsewhere in the body by deformity, inflammation, pain, fever and impairment of function. All of these may be so slightly disturbed by a brain abscess as to pass unrecognized. I believe we have been led to overrate the value of neurological findings in the early diagnosis of brain abscess and have neglected the most important aid,—the history.

Neurological anatomy is so complicated that by our absence of knowledge of this subject we excuse our own lack of skill in the recognition and diagnosis of neuropathological lesions. This defense is unfair when we consider the large proportion of brain abscesses which do not show, particularly in their early course, any positive neuropathological findings.

In looking back over the histories of our brain abscess cases, one can nearly always elicit some very important symptom which if recognized would not have deprived the patient of a chance for recovery. The following cases which have come under my observation and care illustrate why our mortality rate in brain abscess is still 75 per cent.

REPORT OF CASES

Case 1. Miss M. T., age 21, was admitted to Isolation Hospital March 3, 1924, with measles. Four days later she developed a left supraorbital swelling. There was profuse straw colored, watery discharge from both nares and she complained of a slight frontal headache. The following day this condition resembled erysipelas, but her general condition improved; her temperature subsided and she had less headache. Five days later the swelling became localized and when incised over the inner canthus, an ounce of thick yellow pus was drained off. The wound healed promptly.

Without warning her left ear discharged at this time. She had no symptoms of mastoiditis. Apparently this was a very mild type of ear infection as the discharge rapidly diminished and the patient made no complaint relative to the ear. In fact, she made no complaint about any of her illness, insisting she had no headache and no pain. She was quite listless, but answered questions in a normal manner and seemed to resent any examination or disturbance. Her general condition seemed to be improving. Her temperature was never above normal, she lost no weight, ate well and slept well. However, she did have some very unusual symptoms. She frequently had urinary incontinence, and at one time the nurse noticed that she would remove the packing from her supraorbital wound and re-insert it with her nail file. She swore at the nurses and was quite vulgar in her conversation. I corrected her severely about this, but she was not disturbed and apparently took no offense.

On April 1, nearly a month after her admission, in making rounds, I noticed that she was standing at a window on the second floor laughing and joking with friends on the outside of the hospital. She apparently was in good condition and I did not examine her.

The following day she became quite listless and paid no attention to her surroundings. This condition gradually became worse; she seemed to fall into a natural sleep and had a shallow, slow respira-

tion and a regular full pulse of 50. She refused food and water.

I suddenly realized that I was dealing with an intracranial disturbance, but due to the fact that she had a septic foci in her left ear and also one in her left frontal sinus and with the absence of focal symptoms, it was difficult to determine which area



Fig. 2. Case 1. Two months after operation. There is a moderate depression of the left eyebrow.

of her brain to explore. Neurological consultation was of no help. Remembering that her left frontal sinus was involved first, I decided to explore her left frontal lobe.

The frontal sinus showed evidence of a long standing infection and an abscess containing about two ounces of thick white pus, under considerable pressure, was opened in the left frontal lobe of the brain. Immediately the respiration and pulse became faster and stronger, and the following morning she ate a hearty breakfast and carried on a particularly jovial conversation. She remembered very little of her stay in the hospital and nothing at all of the preceding five days. (Fig. 1.)

She had a paralysis of her sixth cranial nerve which promptly cleared up and she made an uneventful recovery. (Fig. 2.) There was a moderate bilateral choked disk which was discovered only the day prior to operation.

COMMENT

It is difficult to understand how a patient with such extensive brain involvement could have passed unrecognized while constantly under one's observation. Three weeks elapsed from her first definite symptoms of brain abscess until she was operated. This period corresponds exactly with that experienced by Bagley, who is also at a loss to explain such dangerous delays. I repeatedly insisted upon a more complete history in this case but the interns were unable to obtain it because the patient had no relatives in the city.

Patients do not suddenly develop urinary in-

continence without cause and the peculiar mental state which aroused my early attention should have brought forth a closer study of this patient. Her serious and almost fatal pre-operative condition shows how hazardous it is to wait for definite localizing signs prior to operation. Such a procedure usually offers the pathologist an opportunity to make the intracranial findings at autopsy.

Case 2. On the 25th of January, 1925, a forty year old man was brought to St. Luke's Hospital with the following history:

On November 2, while working as a carpenter, a scaffold collapsed and he fell about twelve feet. He alighted in the debris on his buttocks and was momentarily unconscious. He felt no discomfort at the time and helped remove his partner who appeared to be more seriously injured.

On the advice of his foreman he went home and that night his wife noticed that he bled from his left ear. The following day he had quite a profuse epistaxis, which was uncommon for him. He felt well enough to work the following day, but was advised by his family not to do so. Two days later he drove his car seventy miles and for the first time complained of a severe frontal headache. Two days after that he took quite an extensive motor trip to a neighboring state and was gone six days. On his return his relatives noticed that he was much slower in his movements and did not answer questions promptly. He tried to chop wood, but was too weak.

His condition remained about the same for a month when he developed a right earache. The

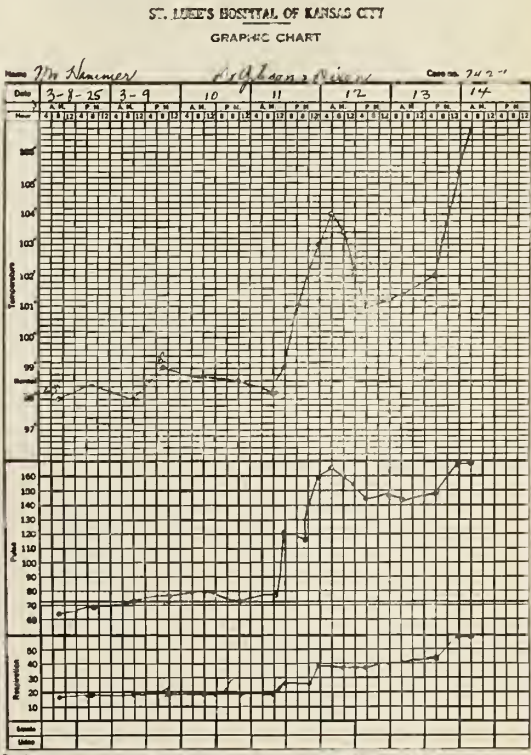


Fig. 3. Case 2. Graphic chart showing the sudden pulse and temperature rise following rupture of the brain abscess just prior to death.

drum was incised, producing a purulent discharge and relief of pain. One week after this he became semiconscious and had several severe vomiting attacks. This was followed two days later (December 17) by convulsions, with head and eyes turned to the left and his head drawn back. His temperature varied at this time between 102 and 106° F. During the first twenty four hours he had fifty two convulsions. A lumbar puncture revealed a cloudy spinal fluid with normal pressure and no demonstrable organisms either by smear or culture. A cell count was not made.

His family physician quite naturally diagnosed a nonepidemic meningitis, but much to their surprise, within three days he seemed to get better. The convulsions stopped and although he was semidelirious and had intermittent attacks of projectile vomiting, his temperature subsided and he began to eat and regained some of his strength. His pulse rate did not go above 48.

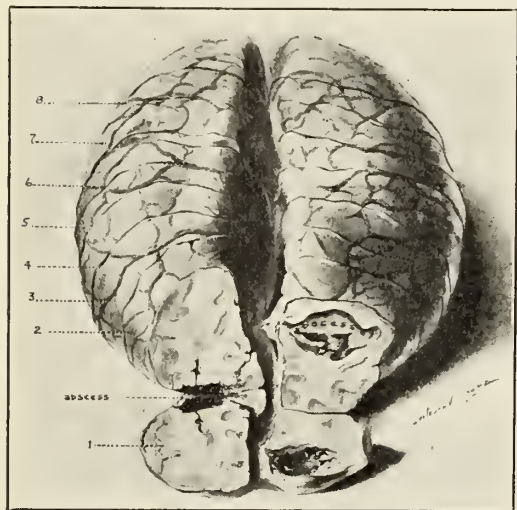


Fig. 4. Case 2. Drawing of brain after fixation showing the bilateral abscesses.

At this time (January 25) he was brought to the hospital. He was in a fair state of nutrition and appeared very much uninterested in his surroundings. He did not look very sick. His response to questions was slow and it was difficult to get his cooperation in the examination. He apparently had some impairment in his hearing. In his right ear was a dried purulent discharge and the left drum was normal. No evidence of injury about his head. Pupils round, regular, equal and reacted normally. There was a moderate increase in swelling of the optic nerve heads, more marked on the left side. Tongue was moist and protruded normally. Pulse rate 46 and regular; Hg. 85 per cent., w. b. c. 12,400, r. b. c. 4,700,000. Blood Wassermann negative.

February 3, after observing him for one week without noting any change in his symptoms, I decided to go in through the right frontal sinus and explore the silent area of the brain. This site was selected partly on account of the suggestive X-ray findings, but principally because an abscess in this portion of the brain could account for the negative localizing signs.

After opening into a normal frontal sinus without evidence of fracture, the inner table was removed and an aerocele was uncovered which expanded with each inspiration. The dura was incised and a large

lumbar puncture needle was inserted. A small amount of caseous material was removed, but no frank pus. A soft rubber tube drain was inserted one and one half inches. There was practically no drainage through this tube. It was removed on the fifth day. The wound healed without infection.

One week later the brain was again explored for an abscess. The frontal wound was reopened. A trephine opening was made over the right temporo-frontal region and the right mastoid opened exposing the dura of the middle fossa. From these openings the brain was explored thoroughly in every direction, both with a needle and a thin narrow spatula. No pus was found and the patient was returned to his room. He made no improvement and died ten days later. (Fig. 3.)

Necropsy revealed multiple abscesses involving both anterior hemispheres of the brain. (Figs. 4, 5.) The right abscess had ruptured into the right ventricle producing a diffuse meningitis. There was no evidence of any primary foci or skull fracture. The mastoid was normal.

COMMENT

It is pathetic to fail in localizing a brain abscess when one feels so certain that an abscess is present. The autopsy findings made the effort seem all the more futile.

This case brings out two interesting points: first, the enormous amount of brain involvement with a total absence of focal symptoms; second, the difficulty of locating a brain abscess at operation.

Case 3. April 29, 1924, a mother brought her nineteen months old son to Mercy Hospital on account of paralysis of the left leg and arm. She gave the following history: The child was a breast fed, full term, healthy baby. Two weeks prior to admission, the boy suddenly developed a high fever and the mother thought he had a headache as he continued to put his hand to the front of his head and held his head constantly to the right side. During this time he had no convulsions, but his fever remained high and he was very sick for four or five days when suddenly there was a profuse, thin yellowish discharge from his nose and the mother noticed that his left leg and left arm were paralyzed. His fever suddenly subsided with the discharge and he appeared to be better.

Following admission to the hospital he had practically a normal temperature, the highest being 100°, white blood count of 10,200, the spinal fluid showed a slight increase of pressure and had seventeen cells per cubic millimeter. He held his left hand tightly closed and there was a spastic condition of his left leg. He was unable to walk and did not stand in his crib. His left eye failed to close when a strong light was flashed in it. He did not appear very sick but was quite irritable.

There was a profuse, yellowish, thin discharge from the left nares which appeared to come from the middle meatus. The mucous membrane was semiatrophic and the organism seemed to be quite destructive. There was a moderate discharge from the right nares. The pharynx was red and congested and there was a post nasal discharge. The ears and tonsils were negative to examination. No swelling, redness, or apparent tenderness over any of the accessory nasal sinuses.

For two weeks after I first saw this child he was apparently free from any change in symptoms. Temperature remained normal, no change in his

paralysis and while he was no better there was nothing which might indicate that he was getting worse.

Suddenly and without warning on May 19 his temperature rose to 105° F., he became comatose, respiration shallow, pupils contracted to almost pin point size, the left being about twice as large as the right. He died forty eight hours later without regaining consciousness.

This termination now assured me that he had had a brain abscess that ruptured into the ventricle or subarachnoid space and produced the high fever, diffuse meningitis, and death. Much to my surprise the autopsy did not bear this out. He had a large soft glioma occupying the right temporoparietal lobe which had brought about a marked increase in intracranial pressure and intraventricular pressure. The cerebrospinal fluid spurted several feet when the brain was incised down to the ventricle.

COMMENT

The acute intranasal infection was merely a misleading coincidence in the course of this tumor's growth. The sudden flareup in temperature apparently was caused by intracranial irritation of the temperature center. Had we not performed an autopsy I should always have thought that this child had a brain abscess. The pathological findings do not excuse the lack of surgical interference. Granting that there was an error in diagnosis the patient was considered as having a brain abscess and should have been operated.

Case 4. Mrs. M. C., age 33, was referred to me on account of a discharging right ear since scarlet fever at three. For the past year she had been bothered with severe headache, of a bursting character, involving the entire head. She had had no fever, had lost no weight and had had no pain in this ear. Her mother stated that the daughter's memory was failing and that she was not so alert as usual. She slept from twelve to fourteen hours each day.

Further history revealed that the patient had had a complete hysterectomy one year before, but she did not know why. Having just read an article by Hertzler on the effects of castration on young women, I immediately decided that this patient was passing through an unnatural menopause which accounted for most of her symptoms.

I advised a radical mastoidectomy on her right ear, which I performed three days later. I found a good sized cholesteotoma extending from the antrum nearly to the dura of the middle fossa. A small area of dura was exposed in the middle fossa and appeared normal. The operation disturbed the patient but little and she made an ordinary convalescence, leaving the hospital on the fifth day.

The only unusual disturbance which the nurse noticed was that the patient became disorientated. Her headache subsided for a time and then returned. The ear discharge diminished and the wound healed promptly. The patient remained over weight and was still mentally dull and drowsy.

Three weeks following her operation her mother told me that her daughter had had some form of fit while eating her dinner. Due to the fact that the mother was unable to give me a very concise description of this disturbance I was inclined to disregard it, especially since the patient showed more improvement and her headache diminished. I advised the husband to remove her from the bad environment of the mother, which he did. She continued to improve and I saw her only occasionally.

Much to my surprise when I returned from a short vacation her family physician advised me that the patient had suddenly had a severe convulsion, followed by a high fever, unconsciousness, and death within twenty-four hours.

COMMENT

Although there was no autopsy it is very obvious that this woman died following the rupture of a brain abscess which she had at the time I first saw her and which I failed to recognize.

Several months later while looking over this patient's chart I found the following in the nurse's notes: "While patient was walking in the hall she had a queer spell, imagined smelling something and had to lie down. Body twitched." The nurse apparently did not con-

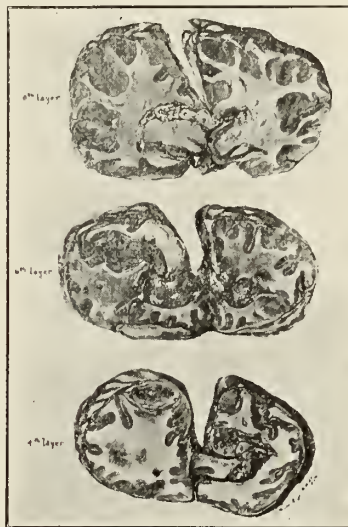


Fig. 5. Case 2. Cross sections of brain through the 4th, 6th and 8th layers, showing the extensive abscess formation and rupture into the ventricles.

sider this of enough importance to tell me and as I did not read her notes, this valuable observation was passed unnoticed.

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DISCUSSION

DR. ROBERT BARCLAY, St. Louis: I was called by a general surgeon to see a similar case that had a subnormal temperature, a subnormal pulse and a case that many years before had had a running ear for years. I saw this case in the afternoon, examined the ear, found the occides had probably been removed, or had sloughed away. There was no evidence of any present active inflammation in the ear at all. However, the diagnosis of brain abscess was made. I advised operation at once. It wasn't convenient, and the surgeon said he would operate the next morning. In the following night the abscess burst and destroyed the patient.

The two points I want to emphasize are, first, the advice of Dr. Wells B. Eagleton, a point he accentuated in his address at the recent Dallas meeting, and that is: no matter what else you do to these cases, if of intracranial involvement, if there happens to be a prime focus of inflammation, an infec-

tion, anywhere else, you must remove that in order to get successful results. That is the first point.

The second is, that an omission to do what is necessary now,—that means at that hour, or that minute,—seals a bond for future trouble in these cases. No one ought ever to put off interfering in a case of this kind until the following morning, and one should always be sure as to whether there is or is not a prime focus of infection elsewhere in these cases.

DR. W. D. BLACK, St. Louis: I want to congratulate the essayist on the success he has had in his brain abscess cases and especially commend him for making a diagnosis; some of his cures were very difficult ones and did not present the usual symptoms. Cerebral abscess from sinus disease is exceedingly rare and being in the silent area of the brain is very difficult to diagnose and frequently is only diagnosed postmortem.

I have had quite a large experience in brain abscesses most all due to the ear. I probably have had fifteen or twenty of my own and seen eight or ten in consultation. In those cases on which I operated the mortality was exceedingly high but will compare with that of other men doing this kind of work.

Dr. Dixon's cases presented unusual symptomatology, but all brain abscess whether cerebral or cerebellar at one time come under one head, i. e., compression of the brain. In other words, the intraventricular pressure added to the exudate produces the symptoms, slow pulse, slow cerebration, headache, vomiting, sometimes fever sometimes not, loss of appetite, vertigo, ataxia, etc. Where compression is very great there is an increase in blood pressure and sometimes monoplegias.

The most important thing to remember in these cases is that in all sinus suppurations or ear suppurations one must be on the lookout for intracranial complications, as early recognition is the only possibility of reducing the mortality.

Early paracentesis of the drum membrane in acute ear disease will prevent many cases of mastoiditis. In chronic cases the symptomatology and X-ray are very valuable in making an early diagnosis of mastoid involvement. Practically all cases of brain abscess from disease of the ear have compression symptoms at some time, and a few cases that have psychic symptoms. In one case on which we operated the patient recovered. Those were the only symptoms present besides a discharging ear. I have had two cases with no ear discharge. Another case gave a history of serious discharge from the ear two or three weeks prior to the time I saw him. Drum membrane was normal. Owing to the fact he had a pain in the occipital region at night, I watched him for days for symptoms of brain abscess. After two weeks, during the night he suddenly developed symptoms of meningitis and died within three days. Postmortem showed an abscess of the cerebellum with no necrosis in the mastoid itself but a slight necrosis in the antrum. I sometimes question the pathologist's report in this case as I thought it was tuberculous in origin, tuberculosis of the cerebellum being rather common. Caseations and liquefactions sometimes occur in an old case where it is walled off and abscess formed. At least eighty-five per cent. of abscess of the brain (including cerebral) are due to the ear and most all of them can be prevented by early opening of the mastoid.

In Dr. Tainter's case he spoke of it being a metastatic abscess. We do have metastatic abscess in conjunction with otitis but it is so exceedingly rare that there always is a question of doubt. The fact that there was no break or infectious tract between the mastoid focus and the abscess does not

mean it is metastatic in the sense that it is due to some distant organ. This case I believe was due to the ear. I had one case of cerebellar abscess which existed a month or more, did not present any classical symptoms outside of headache and postnasal discharge, that suddenly developed meningitis and died. Postmortem showed that the abscess tract was from the pituitary back to the posterior fossa and involved the cerebellum. I do not know whether it originated from the sphenoid and broke upward and backward, or whether it originated in the pituitary and broke into the sphenoid. The only thing the patient had was headache and more or less irregular fever of low type and postnasal discharge, which was intermittent.

During the past ten or eleven months I have had some acute mastoids and at least one half of them did not present classical symptoms of mastoiditis. In fact, one did not have a discharge at all and the temperature that suggested a thrombosis of the lateral sinus was 99 to 105 once or twice daily. The X-ray alone in this case showed that the mastoid was beginning to break down. On operating I found pus and some broken down cells, lateral sinus opened and found healthy. Made a rather stormy recovery requiring transfusion. Mercurochrome was given intravenously without any lasting effect. The irregular fever was due to the virulent infection of the lymphatic glands of the neck.

I will repeat, an X-ray properly made and properly interpreted and a careful study of the symptoms and an early operation will prevent most of these cases of brain abscess.

DR. ERNEST SACHS, St. Louis: I think it is rather important to differentiate the two points that Dr. Dixon made. In the first place he spoke of Macewen's results and compared them with the results that are obtained at the present time. In the last five years, we have adopted a method of treatment of brain abscess which gives us very much better results, and begins to approach the results of Macewen. We wait to drain an abscess until it is encapsulated, if we possibly can, and do not try to drain an acute abscess; second, we drain them slowly, do not try to evacuate them quickly, and drain through a small opening. That, of course, refers to the cases that are diagnosed.

I quite agree with Dr. Dixon that the greatest difficulty still lies in the early recognition of the abscesses and they are, undoubtedly, the most insidious type of intracranial lesion that we see. I have had the experience, as everybody has, of seeing them at the very tail end. I have seen three cases in the last year. I was called in when they were moribund and one on which they were doing artificial respiration. Of course, it is a little hard to do much for them at that stage.

I believe there are two points that would help a great deal if proper attention were paid to them. In the first place, routine examination of eye grounds in cases that possibly might have an abscess, and I refer to all mastoid cases. I think if we could get the ear men (a very few of them I know do) as a matter of routine, to look at the eye grounds and look at them frequently, they would detect cases that are beginning to develop intracranial pressure before it is too late. The other point on which I lay a tremendous amount of stress is that since a vast majority of abscesses are secondary to ears and a considerable number of them occur in the temporal lobe, the careful, routine examination of the eye fields would help greatly. A lesion in the temporal lobe will give you a partial homonymous hemianopsia which by a careful eye field examination can always be brought out. This eye field defect especially in right temporal lobe lesions is often the only localiz-

ing sign. I believe that these two points would frequently help us out of difficulty if that idea could be gotten over.

DR. DIXON, closing: If we are to advance in the treatment of brain abscess we must be constantly on the alert for the early recognition of the most minute symptoms.

Eagleton has suggested as an aid in the diagnosis of brain abscess to divide them into two classes, the probable and the possible.

All patients with chronic discharging ears deserve to be placed in the probable class of brain abscess and studied accordingly.

I feel considerably consoled by the case which Dr. Sachs has described.

I heartily agree with Dr. Sachs that we do not pay enough attention to the visual fields. I have not in my cases.

I wish to emphasize that the history is of the utmost value and if it can be obtained first hand from the family physician it is all the more valuable. The family doctor knows the patient better than we do and he has the advantage of having seen the patient in a normal condition.

CONCENTRATED FEEDINGS IN INFANCY

HUGH L. DWYER, M.D.

KANSAS CITY, MO.

It was not until a comparatively recent time that any food other than the most dilute mixtures of milk were used in feeding very young infants. It was thought that the digestive ferments were lacking in the new born and various predigested or peptonized foods were popular. Pediatricians in America devoted their efforts to modifying cows' milk so that it would possess the qualities of human milk. In Europe, followers of Finkelstein, Pirquet and Schick were making progress along purely empirical grounds by ignoring the prevailing theories of the harmful effect of fat, carbohydrate and concentrated milk mixtures. In this country Marriott was the leader in this movement, and gradually the use of whole lactic acid milk is replacing our diluted sweet milk mixtures.

This progress has come about chiefly in the knowledge that the stools are not the most important guide to the feeding of the infant. Also, that enough calories must be supplied to enable the infant to replace tissue waste and gain in weight regardless of the stools. Finklestein was first to teach that the underfed hungry baby with diarrhea, will often improve and the stools become normal with an increase in food, and that starving the baby merely because he has frequent stools is fallacious and may lead to disastrous results.

The premature infant will not thrive on a dilute mixture, either because he is too feeble to take sufficient nourishment, because it overtaxes his physical capacity, or because of a tendency to vomit. Many other infants not

prematurely born that are underweight cannot take enough of a dilute mixture to enable them to gain in weight, and in those infants who tend to regurgitate easily the condition is aggravated by a large volume of diluted milk.

The reason we have successfully fed babies on dilute milk mixtures was probably due to the large amount of added sugar.

Vomiting is often the result of physical conditions and not indigestion and the secret of successful treatment of vomiting in many instances is to give small amounts of concentrated food at frequent intervals. In pylorospasm, thick cereal mixtures are effective because of their consistency and concentration.

In the well baby that takes a small amount of food or in anorexia the concentrated mixtures enable it to get enough food for its nutritional needs. In whooping cough and other infections, where vomiting is a troublesome complication, the use of a smaller amount of concentrated mixture is advisable.

Examples of some of the concentrated foods are:

1. The Dubo of Schick, which is whole milk boiled five minutes, with the addition of 17 per cent. sugar.

2. The protein milk of Finkelstein, with 10 to 20 per cent. added sugar.

3. The butter flour mixture of Czerny-Kleinschmidt. This consists of 7 gms. butter, heated about 3 minutes in a pan or until the volatile acids are driven off, then 7 gms. of flour added and heated until the mixture becomes browned, 5 gms. sugar and 100 c.c. water.

The mixture is brought to the boiling point, strained, and mixed with milk in the proportion of $\frac{2}{5}$ milk and $\frac{3}{5}$ butter-flour mixture.

4. Thick cereal mixtures as advocated by Sauer made by using 9 ounces of skimmed milk, 12 ounces of water, 6 tablespoonfuls of Farina and 3 tablespoonfuls of Dextrin-Maltose and boiling slowly until thick and pasty. There are several modifications of Sauer's formula and the paste may be fed exclusively for a considerable time or immediately before the breast or bottle feeding.

5. Acidified milk: Boiled whole milk cultured with lactic acid bacteria develops a hydrogen ion concentration that greatly facilitates its digestion by the infant undiluted. To it is added 10 to 15 per cent. sugar in the form of Karo syrup which makes a mixture of high caloric value.

Instead of the cultured lactic acid milk, Marriott has developed an equally good product by adding U. S. P. lactic acid to boiled sweet milk.

Schick improved the concentration of breast milk by adding 10 per cent. cane sugar.

Not all infants need concentrated mixtures. In fact the great majority do well on simple dilutions of milk, water and sugar. In these dilutions the milk and water can be boiled three minutes which improves the digestibility and makes the milk safe from harmful bacteria. Lactic acid can be added to these mixtures oftentimes with benefit.

I have been interested in comparing the progress of infants in two maternity homes, one group on sweet milk mixtures, the other on cultured lactic acid milk with about half of the cream removed. In one of the institutions, about 30 infants each month are started on the bottle when they are ten days old. These babies are started on a mixture of milk and water equal parts boiled together 3 minutes, and 7 feedings of 3 ounces each are given daily. One ounce of cane sugar is added to the day's feeding. I have found that as soon as the infant reaches the end of his first month, 4 ounces of the mixture are needed at each feeding. The ratio of milk to water is increased as the general condition, particularly hunger and weight curve, demand it. With regard to the stools, constipation is the rule and certainly constipation is a welcome sign in bottle fed infants. They usually gain in weight and can tolerate gradually increasing amounts of sugar. Ordinarily, the sugar is held at one ounce daily until the baby weighs 9 or 10 pounds, but where constipation and failure to gain is present the sugar is increased to $1\frac{1}{2}$ or 2 ounces daily.

It has been my practice to increase the food when the infant manifests hunger or fails to gain satisfactorily at the weekly weighing. The hunger is probably a better guide, at least it often is brought to one's attention before the weight disturbance. The caloric value of the food is determined after the hunger and weight curve are considered and therefore is merely a check. It is surprising how much food is needed for these institutional infants, few taking below 60 calories per pound (130 pr K) and many as high as 85 calories (185 pr K) on sweet milk mixtures. The concentrated mixtures are reserved for special feeding cases and will be referred to later in this paper.

At another institution, where approximately 15 infants monthly are taken from the breast at a very early age, cultured lactic acid milk is used. Before the milk is soured, one-half the cream is removed and one per cent. barley gruel added. Mellin's food is added in the proportion of 1 ounce to each quart. This mixture is more concentrated and more easily prepared for institutional infants because only the quantity at each feeding varies in feeding infants of different ages and weights. There is

no particular reason for removing half the cream before culturing the milk or in the choice of the sugar.

The progress of the infants at both institutions is equally satisfactory. There is less digestive disturbance in those on cultured lactic milk, and this is especially true during the hot weather. Very often among the infants on sweet milk mixtures one is found who must have a more concentrated mixture and a change to lactic acid milk, made by adding the acid, brings about a remarkable improvement.

The lactic acid milk, made by adding 60 drops of U. S. P. lactic acid to a quart of boiled cool milk, is more readily taken by older infants than the milk that has undergone bacterial souring and I have found it just as good. Marriott prescribed 60 drops of lactic acid, added drop by drop very slowly with constant stirring. In private practice when curdling of the milk results from adding the acid too fast or before the milk is thoroughly cooled, I have tried adding a less amount of acid with satisfactory results. One or two ounces of Karo corn syrup is added to the quart of milk. I have not used the Dubo of Schick.

The butter-flour mixture of Czerny and Kleinschmidt I have tried to use in about twenty infants whose gain in weight was slow. Some of these made a remarkable gain in weight, especially the first week or two following its use. Several did not do well and were changed to lactic acid milk with satisfactory results. The butter-flour mixture no doubt can be used to advantage in cases of marasmus and, while my experience with it hardly justifies expressing an opinion, I am inclined to believe it is not as easily fed as lactic acid milk. I believe it takes more discrimination in the selection of a suitable case in which to use it and requires closer observation because of the tendency for the infants to develop loose stools. The rationale of butter-flour mixture is essentially that of thick cereal feeding, in other words the carbohydrate is in the form of a polysaccharide plus that of a high fat diet. Absorption of fat is better obtained with a high percentage of carbohydrate. In thick cereal feedings the percentage of fat is low, in butter-flour mixture it is high but the fat is so modified that it is more digestible. The authors advise it for premature infants and others much below weight and advise against its use in acute digestive disturbances.

The thick cereal paste made with cream of wheat and water with added sugar, or according to Sauer's formula, is of particular advantage in vomiting babies. But when added to the daily intake of a bottle fed baby, one or two tablespoonfuls immediately before the bottle

will often cause an increase in weight, even though the milk formula remains unchanged. The paste may be fed with a spoon or packed into a Hygiea nipple in which a large hole has been cut.

Breast milk of course is the ideal food for infants, but it is not uncommon to find an infant fed at the breast in which there is an abundance of milk, who fails to gain properly and frequently has colicky pain and vomiting from overloading.

There is an idea prevalent that if the breast milk is sufficient in amount the infant should be held to breast feeding exclusively as the quality is always suitable. In the great majority of cases this is true, but occasionally it becomes necessary to bring about a more concentration of the food in these infants. Bosworth found by an analysis of breast milk from mothers successfully nursing their infants, a variation of the fat from 1.4 to 5.0 per cent.; of the protein 0.94 to 1.80 per cent.; of the sugar from 4.3 to 7.9 per cent.; and in food value from 12 to 24 calories per ounce. It may be advantageous in some breast fed babies to give a tablespoonful or two of thick cereal gruel before the nursing several times each day, or to replace one or two breast feedings with feedings of lactic acid milk.

One of the most important findings in the study of the digestion in the infant's stomach is the range of hydrogen ion concentration of the ingested food that is most favorable for gastric digestion. The protein is split into its smaller components by pepsin, and peptic digestion requires a concentration of from pH 4.0 to pH 2.0. It is not within the scope of this paper to discuss the value of lactic acid used in cow's milk as a debuffering agent. But the concentration of the food has a favorable effect on the acidity of the ingested food. Babbott found that the gastric acidity varied with the amount of the meal, the greater the volume the less acid is secreted. Therefore the more concentrated the infant's food the closer the hydrogen ion concentration of the stomach approaches that for optimal gastric digestion.

A few words may be said concerning the use of carbohydrates in infant feeding. Most infants do well when 7 to 10 gms. of carbohydrate are added to each 100 c.c. of milk. Many atrophic and premature infants will not gain until this has been increased to 15 gms. per 100 c.c. of milk. Cane sugar is cheap and always available and is probably the equal of any sugar. Experience with lactose teaches that it is liable to cause digestive disturbances. Park believes that two sugars are better than a single sugar and that cereal mixtures with a sugar are superior to sugar alone.

No hard and fast rules should govern the feeding time. Presumably the longer feeding interval gives more time for complete digestion and emptying of the stomach. Ordinarily the four-hour interval is best, but if hunger and failure to gain on suitable food warrants more frequent feedings, then the three-hour interval is best. In feeble, premature or vomiting infants a shorter interval and a more concentrated mixture should be used.

Finally, it should be said that every baby must be given orange juice and codliver oil daily. In the institutional infants referred to, all develop rickets in spite of the fact that codliver oil in daily amounts of two and three teaspoonfuls are given. The lack of handling, of exercise and sunlight are no doubt responsible for the rickets.

SUMMARY

The secret of successful feeding of the feeble, atrophic and premature infant lies in the use of concentrated mixtures rich in carbohydrate, as has been pointed out by Finkelstein.

The use of lactic acid milk, either cultured or made by adding lactic acid to whole sweet milk, with 10 to 15 per cent. added sugar, enables one to feed a concentrated food of high caloric value.

Butter-flour mixtures in properly selected cases, produce a rapid improvement in malnourished infants.

Thick cereal gruel preceding a breast feeding or bottle feeding increases the caloric intake and is especially valuable in vomiting infants. In a digestive disturbance where it is desirable to withhold milk for a day or two the cereal gruel is very useful.

In the acute infections where vomiting is a factor or where a large amount of feeding overtaxes the infant's capacity, such as pertussis and pneumonia, and finally when it is desirable to reduce the fluid intake in enuresis or eczema, the use of a high caloric concentrated food is beneficial.

214 Medical Arts Bldg.

BLOOD CHANGES IN CHRONIC NEPHRITIS*

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The subject assigned to me in this symposium relates to the changes in the blood associated with and presumably due to chronic nephritis. This being a clinical meeting, we propose to

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approach this subject in a practical way and rule out technicalities, minutiae and controversies in the discussion. We assume further that those interested in nephritis will prefer actual personal experiences with chronic nephritis to any amount of compilations of medical literature.

In the classification of nephritis rapidly gaining acceptance throughout America and the continent, that of Vollhard and Farr, the type of chronic renal change dominating numerically is that associated with hypertension. A clear discussion of the subject assigned presupposes a proper understanding of the stages of chronic nephritis. In chronic nephritis thousands of renal units may be destroyed annually before the renal tissues feel the excretory burden, or give any evidence of inability to free the blood stream of the daily toxins of metabolism. If our conception of chronic nephritis is correct, most cases arise years after an acute nephritis comes on, after repeated trivial attacks, or they may be the end results of primary arteriosclerosis, and by any of these three roads the renal tissue, reduced in glomerular functional units, fails to do its excretory work and blood change results. It has been shown by Allen and others that one fourth or less of the renal tissue may carry on renal function. Until this point is reached, blood tests may be relatively slightly changed, though casts and albumen may be present in the urine. This is the stage which we mostly see—the so called chronic nephritis of albuminuria, definite or marked hypertension, cardiac and ocular changes without discernible changes in the blood chemistry and only relative or slight changes in the organized elements of the blood stream. When complete renal insufficiency develops high concentrations of poisons are present in the blood stream. This nitrogen retention is the proof of uremia—the very best proof,—by some considered the only proof of true uremia. If nitrogen retention in the blood stream is present, of high grade, uremia results consistently; if there is no nitrogen retention there is not a uremia, though it may highly simulate uremia. Eclampsia may exist without nitrogen retention; if so, even with convulsions, it is perhaps proper to consider the condition a pseudo uremia. Such pseudo uremias (eclampsia and cerebrovascular catastrophies) demand a study both clinically and chemically in order to differentiate accurately the syndromes.

We will discuss the blood changes in chronic nephritis as follows: (A). Chronic parenchymatous nephritis. (B). Chronic diffuse glomerular nephritis. (C). Malignant arterio-

sclerosis terminating in renal insufficiency. (D). Mixed forms.

The first of these conditions (A) may be mentioned merely to be dismissed with a few words because of its scarcity. This is sometimes termed in America, Epstein's nephrosis. Such cases, when typical, are seen with little or no increase in blood pressure, marked and persistent edema, increase in the cholesterol and other lipid changes of the blood as well as absolute decrease of the blood proteins and relatively high blood globulin in relation to blood protein. The basal metabolism is low, suggestive of hypothyroidism. The urine is typically highly concentrated and highly albuminuric, with changes otherwise clinically and microscopically suggestive of an irritation rather than an inflammation of the kidney. The condition, since it is not a true inflammation has been termed a nephrosis rather than a nephritis. There is some debate whether these types of edema are due to sodium chloride retention. Epstein and others have demonstrated sufficient deficiency in the blood proteins in certain of these cases to explain to their satisfaction the edema. Instead of reducing the protein intake he advises it be increased, a policy which seems rather questionable unless chemical proof guides the dietitian. Such cases are those in which the water logging of the body tissues give the appearance of very marked anemia, no doubt due somewhat to the dilution of the blood. Nitrogen retention is not a marked symptom.

Chronic diffuse glomerular nephritis (B) is by its name associated with a pathological picture of inflammatory, exudative changes in the glomeruli largely affecting both kidneys. Clinically, hypertension is an usual if not an obligatory sign, and in the terminal stages renal insufficiency gives the picture of an anemia, nitrogen retention, and acidosis at times with chloride retention and edema. Certain of these cases are apparently of very long duration, two of my cases having a very definite history of 18 and 24 years respectively, of albuminuria, quite authoritatively diagnosed.

Early study of the blood of these chronic nephritis cases with hypertension will soon convince one that the blood picture microscopically, the study of the hemoglobin and color index may be quite as valuable as the blood chemistry studies. A secondary anemia is considered a very valuable sign in chronic nephritis, and may be looked for even before evidences by biochemical methods prove a renal insufficiency. On the other hand, there may be a florid complexion and normal hemoglobin in relatively long standing nephritis, especially if there is no

renal insufficiency. Chronic nephritis on a basis of blood analysis may be divided into three stages, namely: (1). Chronic nephritis, with more or less albuminuria and casts but with no, or little, evidence of renal insufficiency. (2). Chronic nephritis with blood changes of a relative renal insufficiency. (3). Chronic nephritis with high grade renal insufficiency.

In type one, the history of recurrent nephritis, the hypertension and the albuminuria, with subjective symptoms, may be the most marked evidences of the accuracy of the diagnosis. Such cases may have no increase in the total nonprotein nitrogen, urea, uric acid or creatinine. No discernible change in the blood calcium or phosphates may be found and the CO_2 combining power of the blood should be expected to be within normal range. In these early conditions of chronic nephritis, repeated studies of the nitrogen content of the blood are satisfactory only because they are negative.

In the second stage, the onset of a relative renal insufficiency after many years of nephritis is associated with so many units of renal tissue damaged that the remaining tissue is called upon to do extra duty, symptoms gradually increase, blood pressure is more constant, higher and less susceptible to natural variations and therapeutic measures, while the blood picture gives measurable evidence of intoxication. Hemoglobin begins to fall, the red cell count is under normal, and previously normal blood chemistry figures may arise to borderline or pathological percentages. The noncoagulable or nonprotein nitrogen in milligrams per 100 cubic centimeters of whole blood is reported over 30 or 35, the urea nitrogen over 15; the uric acid may be over 4 and the creatinine, which is as a rule the last to rise, borders around 2.5. In these threatened renal insufficiency cases a cardiac weakness may be sufficient to cause blood chemistry changes to rise to abnormal limits in a short period of time.

The third stage of chronic diffuse glomerular nephritis, readily diagnosed and commonly called "chronic interstitial nephritis," is the terminal stage of high grade renal insufficiency. The onset may be gradual, all symptoms increasing gradually but surely, almost regardless of treatment, or the onset of renal functional collapse may be sudden, the patient dating the extreme symptoms to a definite day when an infection, a cardiac overstrain, or some such incident proved too much of a burden to the kidneys already functioning their utmost. In these conditions of high grade renal insufficiency are the studies in blood changes most valuable in prognosis and treatment.

Anemia of secondary form is perhaps the

most valuable sign of chronic nephritis because the anemia is so frequent, so easily proven and is so definite. Of 187 cases of chronic glomerular nephritis, studied by Brown and Roth, 105 or 56 per cent., showed an average hemoglobin of only 56 per cent. It is not uncommon to find the hemoglobin content much lower. One case at St. Mary's hospital on the writer's service, ran a hemoglobin (Dare) for about one year ranging about 10 per cent. and finally developed a lemon tinge to his skin simulating a primary anemia, though the color index was consistently low to the last. This anemia so marked in chronic nephritis with high grade renal insufficiency is due presumably to failure of the hematopoietic organs in their functions. It cannot be explained, as a rule, on a basis of blood dilution. The white blood count in high grade renal insufficiency may be high, figures in excess of 20,000 not being rare when uremia followed by necropsy shows no discernible evidence of local or general infection.

Chronic nephritis with high grade renal insufficiency is marked by definite evidences of inability of the kidneys to maintain the threshold values of certain protein metabolites of the blood stream. When the broken down products of body metabolism are retained in the blood in excess then uremia develops. The study of high grade renal insufficiency is the study of pre-uremic and uremic conditions. There are those who believe that uremia is due to urea retention and it is found that whenever the blood urea approaches 150 mg. per 100 cc. definite symptoms of uremia develop. There are others who feel that no one metabolite like uric acid, creatinine or amino acid, is the cause of uremia but the combined intoxication of these as well as the unknown nitrogenous products added to the state of acidosis mentioned below, is the cause of uremia. In the late stages of chronic nephritis the kidney fails to excrete nitrogenous poisons as rapidly as they are broken down, and the blood chemist finds these gradually at times, rapidly at other times, mounting to abnormal heights. One must rule out here the temporary renal insufficiency of cardiac failure, or of obstructive anuria, both of which may bring on nitrogen retention in the blood rather suddenly. Such causes are usually easily ruled out. Then, the nonprotein nitrogen of the blood of 100 to 400 mg. per cc. of blood is evidence of the renal crisis. This nonprotein nitrogen is made up, as mentioned above, of certain known products of urea, uric acid, creatinine and amino acids, and certain as yet unknown products of broken down proteins. Each of these products is increased as the total nonprotein nitrogen is increased, the urea

nitrogen, however, at times varying from 50 to 70 per cent, or more of the total N. P. N. In one case of renal insufficiency of high grade, we found a urea nitrogen of 170 mg. per cent. though much higher have been reported.

The study of the nitrogenous nonprotein elements of the blood is of great value to the physician and surgeon. The genitourinary surgeon would hardly feel justified in practicing his art without this science to control renal intoxication. To the internist this method of study of the blood has added enormously to the knowledge of the kidney's functional ability, and bids fair to solve the riddle of uremia. Recent workers on hypertension and nephritis have attempted to prove by these clinical methods, the presence of guanadine, or its salts, in the blood, proportionate to the hypertension present. It seems reasonable, and much to be desired, that such work shall be rewarded soon and this or other metabolites be of proven relation to hypertension and uremia, and the value of blood chemical studies be established and extended.

Acidosis has been described in renal insufficiency for years, and it was taught by certain observers that abnormal acidity of the organism was responsible for albuminuria of nephritis as well as edema. This explanation seems inadequate, yet there seems in nephritis, especially with high grade renal insufficiency, a tendency to acidosis which may be measurable by blood examination. It must be clearly differentiated, however, from the acidosis of diabetic coma, even though the CO_2 combining power of the blood may be low in each. It reaches lower levels, as a rule, however, in diabetic coma than in nephritic coma. In uremia we have had this reach 26 in one case (normal 56 to 65). In the acidosis of a renal insufficiency, there are measurable changes in the phosphate content of the blood—the inorganic phosphates. This ordinarily ranges between 2 to 6 mg. per cent., but may in renal insufficiency be markedly increased, reports being given of 20 mg. per cent. and higher. This phosphate may be in the form of sodium acid phosphate. The calcium blood plasma content is commensurately low, and may be quite low. One case of high grade renal insufficiency had a reduction of blood calcium from a normal of 10 to 6.4 mg. per cent. There are those who think the administration of calcium is a rational therapeutic measure for these cases, and the administration of carbonates may be of value.

Vollhard and Farr describe a condition termed by them a "malignant arteriosclerosis," (C) which to all intents and purposes may be indistinguishable from a severe glomerular nephritis with hypertension. Each has hyper-

tension resistant to treatment, and each may end in renal insufficiency. This type of renal insufficiency, however, may not terminate by a true uremia but may end in vascular catastrophes, and the blood picture early may not be marked with such an anemia as the chronic glomerular nephritis.

Finally there are mixed types (D) or chronic nephritis. Pure parenchymatous nephritis, or lipid nephrosis, is rare. The chronic nephritis due primarily to glomerular disturbances or late arteriosclerotic changes is very common. Nor are these always simple pure, clean cut, uncomplicated varieties. In many cases there is at some time more or less edema. This may be due to cardiac accidents, or may be due to the debatable factor of the retention of salt. Just what is the cause of edema is not yet conclusively proved. Allen believes that the problems of both edema and hypertension may best be attacked therapeutically by assuming that each is due to physical changes in the tissues and blood, due to the use of diets high in sodium chloride and proteins. Blood chemical estimations may not be dependable upon entirely, he thinks, to prove this but argues that the practical test of therapy be used to justify the assumption. We have used his salt free, low protein diet in a number of cases in both hypertension and edema, with good results. Opposed to the hypothesis of Allen that edema is a chloride retention, others believe that the sodium ion is blameworthy for edema. This school recommends the use of calcium chloride, or ammonium chloride, and novasural, if needed, for the reduction of water logging of the tissues. We have found this efficient in certain cases not responding to salt free diets alone.

Recent advances in microchemical methods has aroused enthusiasm concerning the study of the etiology, prognosis and treatment of chronic nephritis. For the enthusiastic the accurate estimations of blood chemistry seems of first importance in the scientific study of these conditions. It was hoped that by accurate determination of quantitative blood organic and inorganic content, the very cause and treatment of uremia would be revealed. We may say now that such determinations are of the utmost value in establishing the *relative or absolute renal insufficiency at the time of blood examination*. Such examinations are throwing light on the types of uremia and are of service in differentiating the true uremia from the convulsive uremias on the one hand and the cerebrovascular deaths on the other hand. Such blood studies have been of service in differentiating the terminal severe anemias of chronic nephritis from other types of anemias, especially primary anemias. Furthermore, such ac-

curate studies are throwing light on the type of acidosis of nephritis, differing, as it does, in having a marked change in the calcium-phosphorus balance and the reduction of the CO_2 combining power of the blood. It has suggested to the thoughtful that the liver may be ultimately connected with death due to hypertension, and that extension of the biochemical methods into the field of unknown and unnamed products of nitrogen retention may solve the problems of chronic nephritis.

Shukert Bldg.

MINOR DISTURBANCES OF PREGNANCY*

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The pregnant woman presents many problems. The physician usually is only interested in the major disturbances, whereas his patient is interested in the minor ones as well, for they are often more disturbing to her comfort during pregnancy. It is our duty to make our patients as comfortable during pregnancy as possible, thus this paper.

The first of the disturbances to appear following the beginning of pregnancy are nausea and vomiting. Some patients have nausea throughout the pregnancy, with occasional vomiting. Other patients have no nausea to speak of. In some, the nausea appears only in the morning, especially on arising; a small per cent. have nausea in the afternoon and evening. Sometimes there is nausea without vomiting, but it is usually accompanied by vomiting. Unfortunately a great many patients make no effort to alleviate the nausea and all too seldom consult a physician.

The treatment generally depends upon the cause—displacement of the uterus, erosions of the cervix, nephritis, etc. These must be corrected. But quite frequently the cause is outside of the pregnancy and cannot be determined.

The taking of some simple food before getting out of bed and then lying still in bed for about half an hour, helps much. Then slowly dressing, taking a light breakfast, followed by a short rest again. Taking small meals (a carbohydrate diet with limited protein and very little fat) at three hour intervals and resting, particularly after meals, is one of the most important methods of treatment. Overfatigue and worry often bring on nausea.

Salivation bothers some patients seriously. Unfortunately, drugs have but slight effect on

this condition. Under no conditions should the patient swallow this saliva constantly.

The teeth in some patients often show a tendency to decay. Cavities should be filled and bad teeth extracted but extensive constructive dentistry should not be undertaken. Alkaline mouth washes are indicated. A diet rich in lime, such as milk, eggs, cereals, spinach, green vegetables, etc., should be prescribed.

Heartburn, gas and flatulence are often present. The former may be relieved by sodium bicarbonate, peppermint, sodamint tablets, magnesia and bismuth salts. Indiscretion in diet must be corrected and any article of diet known to upset the patient before pregnancy must be avoided during pregnancy. A few ounces of cream taken about half an hour before heartburn usually appears will help. Diet regulation combined with a tonic or intestinal antiseptic materially reduces the flatulence. Avoidance of fried foods, especially fried fats, pastry and generally indigestible foods, sometimes prevents the onset of further attacks. In many cases, however, the end of pregnancy alone relieves the distress.

Hemorrhoids are a very annoying and distressing disturbance of pregnancy. Appropriate measures must be carried out at once when they appear and cause discomfort. Internal hemorrhoids when protruding should be reduced; external hemorrhoids should be left alone, as reduction is useless. Rest in bed with elevation of hips and cold applications will give great relief. Ointments and suppositories consisting of tannic acid, hamamelis, menthol, opium, etc., give relief only temporarily. Delivery eventually cures as a rule. Sometimes hemorrhoids become very severe during labor and early in the puerperium. Surgical treatment is usually necessary when they persist after the puerperium.

Varicose veins of the legs usually are due to the enlarging uterus pressing on the pelvic veins. At first only slight burning and itching sensations in the legs are complained of. If the symptoms are slight no treatment is necessary. Much relief is obtained by rest in bed for an hour mornings and evenings. In some cases it will be necessary to have the patient raise her legs to right angles with her body in order to help the blood flow out of the distended veins. A three inch flannel bandage cut on the bias applied to the legs, starting from the toes, will give great relief. Adhesive plaster, put about three-fourths of the way around the leg, supporting the veins, is another measure. In marked cases of varicosity an elastic stocking may be necessary. Elevation of the legs when seated should be practiced whenever possible. Varicose veins also occur

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in the vulva and vagina and broad ligament but rarely trouble the patient during pregnancy although in labor they may become serious.

Cramps in the legs may appear in any part of the pregnancy but usually appear in the latter half. Massage is about the best thing for this disturbance.

Edema of the legs due to mechanical causes (not kidney conditions or toxemia) must be treated similarly to varicose veins. Rest in bed, elastic stocking, or elevation of the limbs give relief.

Abdominal pain is common in the latter half of pregnancy but is also frequently met with in the early stage. Constipation is responsible in the majority of the cases. This must be corrected. Other causes are, natural torsion of uterus, pathological conditions of the broad ligament and tubes, adhesions, appendicitis or pedunculated ovarian cysts. Early in gestation extrauterine pregnancy must be ruled out. In every event the causative condition must be determined and corrected. At times a properly fitting abdominal belt will give relief. Warm camphorated oil, chloroform or other liniments applied to the skin often relieve the symptoms.

Abdominal itching, unless due to a skin disease, is generally due to the stretching of the skin from the enlarging uterus. It does not cause much trouble. Massage with cocoanut butter or olive oil or a soothing lotion relieves this condition.

After one or more pregnancies the abdominal muscles often do not regain their proper tone and we have what is called a pendulous abdomen. It causes drawing sensations in the abdomen, pain in the back, frequent urination and discomfort in walking. A well fitting corset with support from below, or a well fitting binder will give much relief. The knee-chest position may aid a little in relieving the symptoms. Pendulous abdomen in a primipara indicates there is something wrong, possibly a contracted pelvis, a tumor blocking the entry of the head into the pelvis, or placenta previa. Labor may be difficult. Graduated bed exercises, moderate elastic support, attention to the bowels, are preventives to a certain extent.

Backache may be due either to a strain on the muscles of the back, from the compensation of the vertebral column, from the forward protrusion of the abdomen resulting from the enlarging uterus, or from subluxation of the sacro-iliac joint. The latter is characterized by definite tenderness to pressure over the point of the sacro-iliac joint and a waddling gait. The former condition usually is relieved by a properly fitting maternity corset; in the latter, tight adhesive strapping or manipulation to put

the joint back into its proper relations may be necessary. High heeled shoes which incline the trunk forward and necessitate throwing the shoulders back to keep the balance, and pyelitis are responsible for some backaches. Proper shoes and medical treatment will relieve these two conditions.

Skin eruptions should be treated in the usual way. The X-ray had better not be used on acne as the eruption will disappear after labor. Cleansing with soap and water and opening the pustules comprise the treatment.

The average woman gains from ten to thirty pounds in her pregnancy. The short stocky woman usually gains more than the tall slender one. Rapid increase in weight is apt to cause shortness of breath, due not only to the increase of her own weight but to the increase of the enlarging uterus. More or less constant pain in the legs and feet is complained of. Often broken arches are revealed. The discomfort that arises from rapid increase in weight is sometimes great. A rapid increase in weight is not desired and must be prevented by proper nonfattening diet and exercise. A careful and accurate record of the patient's weight must be kept so that rapid gain will be detected.

Frequency of urination is a common symptom in the first few months and when the head sinks in the pelvis at the time of lightening. Malpositions of the uterus, distorting and compressing the urethra, cystitis and ureteritis are sometimes causative.

Insomnia is a common symptom, usually nervous, often toxic in origin. Some cases respond well to the drinking of a glass of hot milk before retiring. Bromides and soporifics are about the best drugs to use.

Sleepiness in early pregnancy requires no treatment but in the latter part of pregnancy it may foreshadow the advent of eclampsia.

Numbness and tingling of the hands and feet sometimes combined with slight puffiness, not real edema, are the evidences of a mild neuritis, generally toxic in origin. Treatment is on this theory.

Fainting spells annoy some women,—a little excitement,—being in a closed room, or sometimes without apparent cause. Heart and lung diseases must be ruled out. The diet should be nonnitrogenous; crowds, excitement and irrational dress should be avoided. A tonic may be indicated. The condition is harmless and should be so explained to the patient to allay worry.

Neuralgias and neuritis are sometimes met with in pregnancy. The cause must be determined. Infected teeth, tonsils, sinuses or other foci should be looked for and corrected.

Salicylates and coal tar products usually give at least temporary relief.

For the simple leucorrhea common toward the end of pregnancy, no treatment is necessary. If the leucorrhea is accompanied by an inflammation of the vagina or of the urethra, a careful examination must be made to determine the cause. Gonorrheal infection must be treated through the pregnancy so no serious complications arise at the birth of the child.

In this paper each subject has been treated briefly. I hope I have impressed the importance of relieving, wherever possible, discomfort and suffering regardless of the fact that the symptoms discussed are mostly of a minor nature. Many of the symptoms may be toxic manifestations and should be carefully considered, for the symptoms presumed to be minor may be major and involve the life of the mother and child.

RELIEF FOR THE PAIN IN CARCINOMA OF THE FACE

Since by far the greater number of subjects with painful cancerous lesions of the face refer the pain to the trigeminal distribution, it is with this nerve or its three terminal divisions that one must most frequently deal. In the series of thirty-five cases reviewed by Francis C. Grant, Philadelphia (*Journal A. M. A.*, Jan. 16, 1926), in only seven was pain located outside this area. Six of the patients complained of pain in the ear, behind the ear and on swallowing. Successful injection of the second and third divisions of the trigeminal and avulsion of its sensory root did not afford the patients much relief. In dealing with pain referred to the trigeminal distribution, intracranial neurectomy is the procedure of choice. Direct exposure of the nerve roots makes it certain that they have been cut and that the maximum benefit will be obtained. Peripheral injection is more frequently employed, for patients dread the formal operation. Injection of the terminal divisions may be difficult in the presence of a malignant lesion, since the normal course of the nerve is often distorted by the pressure of the growth. In this series, twenty-four patients have been injected, with complete relief of pain in seventeen. In four, a decrease in pain resulted. Three were unaffected, although the typical anesthesia of a successful injection was produced. In ten cases, the nerve could not be reached, and no anesthesia or relief of pain followed. In five of these, operation was subsequently done with complete freedom from pain in three and partial relief in one. One patient was not relieved. Five patients were subjected to operation as a primary measure, three of whom were completely relieved. One, who died on leaving the operating room, had been given a local anesthetic and the ganglion exposed and injected with 2 c.c. of 10 per cent. cocaine. Up to that time, his condition had been good, but within fifteen minutes of the cocaine injection, he suddenly stopped breathing. A second patient died ten days after operation, from meningitis. The malignant growth had involved the ethmoid cells and the base of the skull over them. If the malignant growth is situated superficially within the trigeminal area, the results from nerve block are very much more satisfactory than when the deeper areas of the face and mouth are involved.

If the accessory sinuses, especially the ethmoid and phenoid or the floor of the mouth, are the site of the lesion, the prognosis for complete relief should be very guarded. Of the thirty-five patients in this series, twenty-one were entirely freed from pain, six were much improved, and eight showed no change. In five of this last group, the lesion was situated in the floor of the mouth with involvement of the tonsillar pillar, and three had extensive degeneration in the maxillary bone and adjacent accessory sinuses. These three subjects refused further treatment after attempts at alcohol injection failed. Among the twenty-one patients completely relieved, nine died peacefully from metastasis within eighteen months following injection; seven are pain-free and receiving treatment. Five are apparently cured two years after treatment. In small painful lesions, with a fair chance of complete removal if vigorous treatment is instituted, nerve blocking by alcohol injection is especially valuable. Once the lesion is healed, the pain disappears. If subsequently the anesthesia from the injection wears off, it has done its work and the face regains its normal sensation. Nerve blocking of the branches of the trigeminal for the relief of pain from cancerous lesions about the face is an act of mercy. It does not cure the lesion. Often that is impossible, but it makes the sufferers' last days comfortable.

RADIUM (MESOTHORIUM) NECROSIS

An investigation into the subject of radium necrosis was suggested to Frederick L. Hoffman, Newark, N. J. (*Journal A. M. A.*, Sept. 26, 1925), by a number of unusual cases of necrosis among young women all of whom had at one time or another been employed at a radium plant engaged in the manufacture of luminous watch dials. Twelve cases were studied. The patients had all done precisely the same work and in precisely the same way. They all were in the habit of wetting a penciled brush with their lips, while in use, for the purpose of painting watch dials with luminous or phosphorescent substances. Apparently, radium necrosis occurs only under certain and quite exceptional conditions. It is not the fact of general exposure to radioactive substances or nearness thereto, but apparently, the direct result of introducing such substances in minute quantities into the mouth through the insanitary habit of penciling the point of the brush with the lips. Every case investigated gave an unmistakable history of this habit, while the numerous roentgenograms clearly indicate the consequences to both the roots of the teeth and the jawbone.

LIVIDO RETICULARIS

There is a congenital anomaly of the blood vessels, which in some cases is revealed as a transitory, violaceous mottling on exposure to cold. The same or a similar anomaly may show itself as a permanent mottling, extremely variable both in extent and in severity. This condition may be revealed only when the circulation is impeded by some other agency. This anomaly may govern the distribution of eruptions due to other causes, notably tuberculosis and syphilis, especially when these diseases involve the small blood vessels. Charles M. Williams and Herman Goodman, New York (*Journal A. M. A.*, Sept. 26, 1925), report two cases of this affection. These two cases belong to the group of livedo reticularis idiopathica.

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EDITORIALS

ADDITIONAL AMENDMENT TO THE MEDICAL PRACTICE ACT

In our September issue we published the amendments to the medical practice act which the committee on legislation recommended. The committee had in contemplation at that time the preparation of a bill making it a criminal offense for any medical college in this state to issue a medical diploma to any one who had not attended the four years required by the statutes and also making it a violation of the law for any person to accept a diploma from a medical school unless he had attended the full four year period. This bill has now been prepared and will be introduced at the 1927 session of the legislature. The bill follows:

Be it Enacted by the General Assembly of the State of Missouri, as follows:

Section 1. Any officer, agent or employe of any medical school or college in this state, whether organized as a corporation, association, partnership, common law trust, or individually owned and operated, who knowingly permits the issuance of any diploma or any certificate of graduation from any such medical school or college as aforesaid to anyone, unless the recipient or beneficiary thereof has actually attended in good faith at least eighty per cent. of each of four school years, each of not less than thirty-two weeks' extent, in this or some other state, and has received instruction in and has satisfactorily passed all the courses and subjects purporting to be required by said school for completion of its course and has actually been granted a degree by vote of the trustees of said college or school, shall be guilty of a misdemeanor and punished by imprisonment in jail for a term of not less than three nor more than twelve months, or by a fine of not less than one hundred dollars nor more than one thousand dollars, or by both such imprisonment and fine.

Section 2. Anyone in this state, whether a resident or sojourner, who knowingly accepts or receives a diploma or certificate of graduation from any medical school or college in this or any other state, province or country, which can or may be used or offered as a means of obtaining an examination before any state board of medical examiners for a license to practice medicine or surgery in Missouri or elsewhere, without having first attended in good faith at least eighty per cent. of four school years, each of not less than thirty-two weeks in extent, of a medical school or college in this or some other state, province or country, and without having satisfactorily passed all the subjects and courses which purport to be required for receipt of the degree of

doctor of medicine, and has actually graduated therefrom, shall be guilty of a misdemeanor and punished by imprisonment in jail for a term of not less than three nor more than twelve months or by a fine of not less than one hundred dollars or not more than one thousand dollars, or both such imprisonment and fine.

CONTROLLING EXPERT MEDICAL TESTIMONY IN CRIMINAL TRIALS

Another bill that will probably be introduced by the Missouri Association for Criminal Justice was prepared by our special committee appointed to cooperate with that association in attempting to establish some system of control of expert medical testimony in criminal trials where the plea of insanity has been entered. According to the provisions of the bill we have prepared, there is created a department of mental diseases to be administered under the supervision of the state board of eleemosynary institutions. When the plea of insanity is entered before any court in the state, the court may require the department of medical diseases to assign members of the staffs of the state hospitals to examine the accused as to his sanity. The report of the finding must be made to the court in writing and shall be available to the counsel on both sides. If the accused is acquitted on the ground of insanity, the trial court must order the person so acquitted to be committed to a state institution for the insane. The bill also requires the department to examine all the inmates of the penitentiary and the reformatory at least three times a year and to commit such persons as are found to be insane to the proper state institutions.

Further clauses provide for the erection of a new state hospital especially equipped for the care and treatment of the criminal insane. The bill follows:

Be it Enacted by the General Assembly of the State of Missouri as follows:

Sec. 1. There is hereby created a Department of Mental Diseases, which shall be under the supervision and management of the Health Supervisor and the six members of the Board of Managers of the State Eleemosynary Institutions. At least one member of the Board besides the Health Supervisor shall be a physician with knowledge of the proper care and treatment of the insane.

Sec. 2. The President of the Board of Managers shall be the presiding officer of the Department of Mental Diseases, and he and the Health Supervisor and the other members of the Board shall receive no additional compensation for performing their duties as members of the Department of Mental Diseases, except their necessary traveling and hotel expenses while engaged in the performance of their duties as such members of said Department of Mental Diseases.

Sec. 3. The Board shall meet at least four times

each year, and at such other times as the President shall call to consider matters relative to the Department of Mental Diseases.

Sec. 4. In order to determine the mental condition of any person coming before any Court of this state when and where the question of sanity becomes an issue, the Court may, on its own motion, or upon the application of counsel on either side, within the limits of existing law, request the Department of Mental Diseases to assign a member or members of the medical staff of any state hospital to make such examination of the mental condition of the individual involved as he or they may think proper and necessary. A report of the finding and the result thereof shall be made in writing to the Court, which report shall be available to counsel on both sides for their information.

The examiners, when duly subpoenaed, shall appear and testify as witnesses with respect to their examination and finding aforesaid, but shall not receive any additional compensation therefor, except the statutory mileage for attendance.

Sec. 5. If anyone charged with a felony shall, upon trial, be acquitted on the ground of insanity, the trial court shall order him or her committed to the proper state institution for the insane.

The procedure for such committal shall be in accordance with the statutes now or hereafter existing governing cases of insanity, except the determination of the issue of insanity, which shall be considered as adjudicated by such trial court.

Sec. 6. The Department of Mental Diseases shall examine, or cause to be examined by members of the staff of any state hospital or hospitals at least three times each year, the inmates of the Missouri State Penitentiary and the Missouri Reformatory, and make a report thereof in writing to the Commissioners of the Department of Penal Institutions and the governor. Such inmates as are found by such examination to be insane shall be removed immediately by the Commissioners of the Department of Penal Institutions to the proper institution provided by the state for such unfortunates.

Sec. 7. There shall be erected and properly furnished and equipped a new state hospital specially equipped for the detention, care and treatment of the criminal insane and mental defectives, under the supervision of the Department of Mental Diseases.

Sec. 8. It is hereby declared that this act is necessary for the immediate preservation of the public welfare, health and safety, and in the opinion of the General Assembly an emergency exists, and therefore this act shall take effect and be in full force and effect from and after its passage.

There is some objection to the president of the board of managers of the eleemosynary institutions, who is a layman, being the presiding officer of the department of mental diseases. There are, of course, good grounds for this objection but the dual nature of the two departments made it impractical to name any other officer. Of course the bill can be amended if a way is found to overcome this objection.

MEDICAL PROTECTIVE COMPANY WILL RENEW POLICIES FOR MISSOURI PHYSICIANS

In the latter part of September, the Medical Protective Company, of Fort Wayne, Indiana,

notified us that they would discontinue writing liability policies for Missouri physicians and would cancel all policies at expiration. We had considerable correspondence with the company in an endeavor to effect a reconsideration of this decision on their part and were told that they had definitely decided to withdraw from the state. In response to numerous inquiries from members who had been notified that their policies would be canceled on expiration, asking for the name of another company who would write this character of insurance, we investigated the field and found a very limited number of reliable companies who would undertake to write physicians' liability insurance.

After consultation with the chairman of the defense committee and the acting chairman of the council, we decided to advise the members of the advantages of the Metropolitan Casualty Insurance Company, of New York. In response to the notice, over 700 members asked for information concerning the Metropolitan Casualty Insurance Company's policy.

A few days after the letter to the members was sent out, the Medical Protective Company, of Fort Wayne, Indiana, notified us that they would renew all policies held by Missouri physicians on expiration, including those that had expired. Members who hold policies with the Medical Protective Company, of Fort Wayne, Indiana, need not now be disturbed concerning their protection for the company will continue their coverage.

MISSOURI PHYSICIANS IN WHO'S WHO

The biennial appearance of "Who's Who in America" is always an occasion of general interest, because in this book is found the names of those persons who have achieved distinction in every walk of life, or have been elevated to positions of prominence in national, state, or civic affairs. The present volume is the fourteenth edition and contains 26,915 life sketches. Of these, 324 are from St. Louis and 129 from Kansas City. The total number of physicians listed in Missouri is 58, St. Louis furnishing 38 names, Kansas City 14, St. Joseph 2, other towns 4. The 1926 edition contains seven new names of Missouri physicians, viz: Dr. Evarts A. Graham, St. Louis, originator of cholecystography for visualization of the gallbladder, Dr. Emmett P. North, St. Louis, former president of our Association and president of the State Board of Health during the exposure of the medical diploma mills. Other members of our Association whose names appear for the first time are: Dr. Duff S. Allen, St. Louis, sur-

geon, who worked out a surgical procedure for reconstruction of the esophagus and devised the first method for doing operations inside a living heart under direct vision; Dr. M. B. Clopton, St. Louis, surgeon; Dr. W. T. Coughlin, St. Louis, head of the department of surgery, St. Louis University Medical School; Dr. Katherine B. Richardson, Kansas City, founder of Mercy Hospital.

NEWS NOTES

Dr. Louis H. Mestemacher, St. Louis, one of the prominent young surgeons of St. Louis, died from blood poisoning, October 27.

Dr. Guy L. Noyes, Dean of the Medical School of the State University, Columbia, was elected vice president of the Association of American Medical Colleges at the recent meeting held in Cleveland.

Dr. Victor Cadwell, Poplar Bluff, widely known surgeon and owner of the Cadwell Hospital, died at his home, October 20, from heart disease. Dr. Cadwell had been ill for several months. He was 58 years old.

Dr. A. R. McComas, Sturgeon, Chairman of the Council, after an absence of two months in Switzerland, France and England, where he went as the surgeon of the American Delegation to the International Press Congress, at Geneva, has returned home.

Dr. William Engelbach, St. Louis, was the guest of the Austin-Flint Cedar Valley Medical Society, Waterloo, Iowa, recently and delivered an address on "Endocrinology as Related to Diseases of Other Systems." He also conducted a clinic on endocrin diseases. Dr. Engelbach has given intense study to endocrinology, which has brought him numerous invitations to address various societies on this subject. At the meeting of the Southern Medical Society in Atlanta he will conduct a series of clinics at the Good Samaritan Hospital and he read a paper on "Endocrinology" before the Pike County Medical Society at Barry, Illinois, in October.

Two billion dollars annually is the amount that sickness costs the people of the United States and a similar sum is lost through premature deaths, according to a statement by Louis I. Dublin, statistician of the Metropoli-

tan Life Insurance Company. At present, less than 50c per capita, or \$60,000,000, is expended on public health work annually, but only a part of this is directed toward the prevention of disease. It is estimated that an expenditure of \$2 per capita properly directed against preventable disease and for health education would reduce the annual death rate two points per thousand and give an increase in the expectation of life of possibly five full years.

At the meeting of the Board of Trustees of the American Medical Association, September 9, Dr. Wm. McKim Marriott, St. Louis, was elected a member of the Council on Pharmacy and Chemistry to succeed Dr. John Howland, deceased, and Dr. A. R. McComas, Sturgeon, was elected a member of the committee on the home for indigent physicians. The latter committee was created for the purpose of ascertaining the number of indigent physicians throughout the country and what facilities are in effect to care for them.

There is a vacancy in a position of specialist in pathology at the Veterans' Bureau Hospital at Knoxville, Iowa, and applications are being received for the position. The entrance salary is \$3,800 a year. Promotion to higher grades may be made in accordance with the civil service rules. Applications will also be received until December 30, 1926, for the positions of junior medical officer, assistant medical officer, associate medical officer, medical officer, senior medical officer, in the federal classified civil service throughout the country.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C.

The Southwest Missouri Medical Association held its annual meeting at Springfield, October 28, 29. About 125 members were present. Dr. Jabez N. Jackson, Kansas City, President-Elect of the American Medical Association and Dr. W. H. Breuer, St. James, President of the Missouri State Medical Association were invited guests and delivered addresses. The Missouri State Medical Association provided speakers on the Postgraduate Extension Course as follows: Dr. W. C. Gayler, St. Louis, "The Newer Obstetrics." Dr. Ellis Fischel, St. Louis, "The Present Status of Radium Therapy." Another guest was Dr. Wm. Riehoff, Jr., of Johns Hopkins Hospital, who delivered an address on "The Relation of Hyperthyroidism to the Origin of Certain Benign Tumors of the Thyroid Gland."

Beginning with 1928, the University of Missouri will require three years of arts work for admission to the medical school. There will be no change in the specific subject requirements in arts, the combined course in arts and medicine being made up of three years of arts work and one year of medicine. On this plan students may receive the degree of Bachelor of Arts at the end of the first year of the medical curriculum and receive also the degree of Bachelor of Science in Medicine at the end of the second year of the medical curriculum. Thus making them eligible for admission to the third year of any medical school without conditions. Under the present system, certain schools require some of our two year graduates to make up deficiencies between their curricula and the curriculum of the Missouri University Medical School.

According to Dr. E. R. Weidlein, Director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, N. J., has established at the Institute a Fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the processes of renovating used supplies, and several other Industrial Fellowships of the Institute will cooperate in devising satisfactory procedures.

Dr. Frederick H. Slayton (M.D., Rush Medical College) will be in direct charge of this comprehensive research. The Fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded.

In carrying on this work, Dr Slayton and the Institute's executive staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

The United States Civil Service Commission announces an open competitive examination for medical interne (psychiatric). Applications will be rated as received until December 30. The examination is to fill vacancies in St. Elizabeth's Hospital, Washington, D. C., at \$1,860 a year, and vacancies in positions requiring similar qualifications at this or higher or lower

salaries. Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

The following have been accepted for New and Nonofficial Remedies:

B. B. Culture Laboratory, Inc.

Bacillus Acidophilus Culture (B.A. Culture)
Eli Lilly & Co.

Pertussis Vaccine—Lilly, 5 cc.

Scarlet Fever Streptococcus Antitoxin—
Lilly (Refined and Concentrated), 1
syringe.

H. K. Mulford Co.

High Ragweed Pollen Extract—Mulford;
Lamb's Quarters Pollen Extract—Mul-
ford; Low Ragweed Pollen Extract—
Mulford; Ragweed Pollen Extract (Fall)
—Mulford; Timothy Pollen Extract
(Spring)—Mulford; Water Hemp Pol-
len Extract—Mulford; Wormwood Pol-
len Extract—Mulford.

Butternut Protein Extract—Mulford;
Cheese Protein Extract—Mulford; Cher-
ry Protein Extract—Mulford; Cocoanut
Protein Extract—Mulford; Crab Protein
Extract—Mulford; Duck Protein Ex-
tract—Mulford; Duck Feathers Protein
Extract—Mulford; Garlic Protein Ex-
tract—Mulford; Ginger Protein Extract
—Mulford; Goose Protein Extract—Mul-
ford; Grape Protein Extract—Mulford;
Grapefruit Protein Extract—Mulford;
Haddock Protein Extract—Mulford;
Halibut Protein Extract—Mulford; Her-
ring Protein Extract—Mulford; Mustard
Protein Extract—Mulford; Nutmeg Pro-
tein Extract—Mulford; Paprika Protein
Extract—Mulford; Parsley Protein Ex-
tract—Mulford; Parsnip Protein Extract
—Mulford; Peach Protein Extract—Mul-
ford; Pear Protein Extract—Mulford;
Pecan Protein Extract—Mulford; Pine-
apple Protein Extract—Mulford; Prune
Protein Extract—Mulford; Raisin Pro-
tein Extract—Mulford; Shrimp Protein
Extract—Mulford; Sole Protein Extract
—Mulford; Tuna Fish Protein Extract—
Mulford; Turnip Protein Extract—Mul-
ford; Walnut (Black) Protein Extract—
Mulford.

Scarlet Fever Streptococcus Antitoxin Con-
centrated (for the blanching test), 1 cc.

Digitos

Digitos Ampules, 1 cc.

Solution Pituitary Extract Surgical—Mulford Ampules Solution Pituitary Extract Surgical—Mulford, 1 cc.

Parke, Davis & Company

Ovarian Substance Soluble Extracts—P. D. & Co.

Ampules Ovarian Substance Soluble Extract—P. D. & Co., 1 cc.

Ovarian Residue Soluble Extract—P. D. & Co.

Ampules Ovarian Residue Soluble Extract—P. D. & Co., 1 cc.

Richards Inc.

Psyllium Seed—Richards

E. R. Squibb & Sons

Ipral

Ipral Tablets, 2 grains

United States Radium Corp.

Ampules Radium Chloride, 2 cc.—United States Radium Corp. (radium element, 50 micrograms)

States Radium Corp. (radium element, 2 micrograms) For Drinking Use.

Nonproprietary Articles

Psyllium Seed

Change of Agency

Siomine, formerly distributed by Howard-Holt Company, is now distributed by Pitman-Moore Company, which supplies $\frac{1}{2}$ gr., 1 gr., 2 gr., and 5 gr. capsules. The Council has continued the acceptance of Siomine under the new distributor.

OBITUARY

JOHN W. LIGHTNER, M.D.

Dr. John W. Lightner, Odessa, passed away at his home shortly after noon September 19, 1926. He had been ill for some time. Dr. Lightner was born in Sibley, Missouri, February 12, 1851. After leaving the country school he went to Nevada, Missouri, and attended school and later read medicine under the capable supervision of Dr. Willis P. King. He attended the Louisville Medical College from which he graduated in 1876 and at once located at Napoleon, Mo., where he remained for seventeen years, and by his kindness and skillful ability as a doctor he made a host of friends. He was married to Miss Dora Sams, of Carrollton, Kentucky, September 9, 1879. The family moved to Odessa in 1893 and Dr. Lightner associated himself in the drug business with Dr. W. C. Goodwin. His wife and two children survive him. Funeral services were held at the Baptist Church of which he

was a member and a deacon. The members of the Lafayette County Medical Society attended in a body. The Odessa Masonic Lodge had charge and the body was laid at rest in Mount Mariah Mausoleum, Kansas City, Mo.

EDMUND LISSACK, M.D.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

Camden County Medical Society, November 23, 1925.

Howard County Medical Society, January 8, 1926.

Chariton County Medical Society, January 20, 1926.

Reynolds County Medical Society, February 22, 1926.

Ralls County Medical Society, February 27, 1926.

Madison County Medical Society, March 16, 1926.

Schuyler County Medical Society, March 25, 1926.

Franklin County Medical Society, March 29, 1926.

Howell-Oregon Medical Society, April 7, 1926.

Webster County Medical Society, April 7, 1926.

Monroe County Medical Society, April 14, 1926.

Platte County Medical Society, April 23, 1926.

Atchison County Medical Society, April 26, 1926.

Saline County Medical Society, May 15, 1926.

Carter-Shannon Medical Society, June 28, 1926.

Bates County Medical Society, September 17, 1926.

Laclede County Medical Society, October 13, 1926.

Pettis County Medical Society, October 19, 1926.

PROCEEDINGS OF THE KANSAS CITY ACADEMY OF MEDICINE

Meeting of February 19, 1926

CORPUS LUTEUM DURING PREGNANCY. FURTHER OBSERVATIONS ON INTRAVENOUS ADMINISTRATION.

—By DR. J. MILTON SINGLETON.

There is still considerable controversy and uncertainty in regard to the value of the extracts of the glands of internal secretion in the treatment of clinical conditions. The ovarian extracts and corpus luteum preparations are probably the ones most used, and likewise the ones about which least is known. The function of the ovary with its hormones is probably less constant and more complex than other glands, and consequently more difficulties are en-

countered in its study. These observations add another thought of interest to what has been said about the ovary and suggest further experimental work.

Since the appearance of the articles by J. C. Hirst on "The Intravenous Use of Corpus Luteum in the Early Nausea and the Vomiting of Pregnancy," I have used, in nearly all of my cases presenting this symptom, by his technic, the one preparation recommended for intravenous use. My experience coincides with his, the results having been almost always complete relief from symptoms. One case, exhibiting slight hyperthyroidism, was made somewhat worse by one injection. This also coincides with Hirst's experience. This patient returned and received the full course of treatment in a subsequent pregnancy, and she and her husband were most grateful for the relief obtained. This patient could not cook a meal but after her first injection was able to resume her household duties. Other patients complained of nausea and headaches, which, however, disappeared fifteen minutes after the injection.

The technic advised by J. C. Hirst is the administration of two cubic centimeters intravenously every other day for six doses. I have given six doses, beginning with one cubic centimeter, making blood pressure readings before and after injection, and giving the remaining doses from one to three cc. depending on the effect on the blood pressure. It has seemed to me that the cases where blood pressure reduction is most marked are those who experience the greatest degree of relief. I have seen reduction in blood pressure that at first alarmed me, but have never seen any shock reaction, except in one case where a preparation not definitely prescribed for intravenous use was given by an intern. Having given several hundred injections, I feel that its use intravenously is harmless, provided its effect on blood pressure is observed and provided it is not given to patients exhibiting hyperthyroidism.

Starting with the known fact that the hypertrophy and growth of the uterine muscles occurs during the first four months of pregnancy, that this is the period of the development of the labor machine, it is logical to conclude that with a well ordered metabolism a high state of nutrition during this period will provide a normally developed uterine musculature. If the corpus luteum of pregnancy has any function it probably stimulates development of the uterine muscles and aids other organs and tissues to carry the added burden of pregnancy. If the administration of corpus luteum intravenously will relieve a neurotic or toxemic vomiting of early pregnancy, if it will in addition to this supply a missing stimulant for the growth of a normal, well developed uterine musculature, we should expect the patient who receives it to have a labor more nearly normal than the patient who is nauseated and vomiting, and who is somewhat undernourished and inactive for the first three months.

So, it frequently has been my impression that the patient to whom I have administered corpus luteum has had a labor far easier than was expected, that the uterine contractions have been more nearly normal, that effacement and dilation of the cervix has been more satisfactory and more rapid than was to be expected in the particular case. Three consecutive cases so forcibly impressed me that I decided to bring them before you, and a fourth in part as I have not her complete records. Two of these patients are older, I believe, than the reported ages, large-boned, inactive type, both having worked in offices. The third is a younger woman who had suffered from dysmenorrhea all her menstrual life and

chronic constipation of long standing. She had had a cervical dilatation for sterility. The fourth, which I report only in part, is a girl of fifteen years of age, who claimed to have been raped and suffered from the shame of this and the inactivity which her position imposed upon her. She had also a very severe nausea, a general under development, an inflexion with a long immature cervix, and a funnel pelvis.

DISCUSSION

DR. T. H. ASCHMAN: I think Dr. Singleton's paper is very interesting and that he obtained interesting results. I would like to ask whether in treatment he depends entirely upon corpus luteum to stop vomiting or combines the usual routine for nausea and vomiting. I have not used corpus luteum intravenously but have used it rather extensively through the skin and muscle and in some cases I think it helped but in others I was not sure of the result. I feel that in many cases nausea and vomiting are due to pathology in the pelvis, usually the fundus being small with a long, slender cervix. In using corpus luteum I think the action is greater with certain products which are protein free. I have been using this product to the exclusion of others and feel that I have been getting better results.

DR. G. E. KNAPPENBERGER: If I heard Dr. Singleton rightly he said to give this intravenously. Is there anything to prove that ovarian extract can be given by mouth and get results in vomiting of pregnancy?

DR. PAUL GEMPEL: Concerning work on eleven cases in the Methodist Hospital in Philadelphia, I do not believe that Dr. Hirst was quite as enthusiastic about the treatment as he was at the beginning. As I remember these eleven cases, five of them came out with excellent results. Two on examination had retroversion of the uterus and the nausea was immediately stopped by correcting the malposition. The other four cases did not respond to corpus luteum. I think Dr. Hirst began to realize that beside the corpus luteum there was an added factor, the effects of the other endocrine glands, and he began using anterior pituitary body, ovarian substances and small doses of thyroid. As I remember, he gave 5 grains of whole ovarian substance, $\frac{1}{4}$ grain of thyroid and 2 grains of anterior pituitary body, three times a day. In the most severe cases, predigested food per rectum and a lot of liquid by hypodermoclysis were given. At Cleveland Maternity Hospital under Dr. Arthur Bill very little corpus luteum was used in early toxemia last year. The doctor felt that he did not get the results which would warrant its use as a routine procedure. In fact, I believe out of three thousand cases in the out-patient department, corpus luteum was not used in any one of them, and we had a very remarkably low number of toxemias. Cases in the hospital received heavy doses of sedatives, glucose and soda enteroclysis and saline solution by hypodermoclysis. Dr. Bill thinks it primarily a hypersensitive state of the general nervous system and the autonomic system, influenced by some disturbance of the interaction of the endocrine glands.

DR. SINGLETON (in closing): In reply to Dr. Aschman, the cases reported were not cases of pernicious vomiting of pregnancy, and I am not pretending to advance corpus luteum as the sole treatment of pernicious vomiting of pregnancy. These cases in which I have used corpus luteum were cases of early nausea and vomiting in pregnancy of varying degree.

I think when you get pernicious vomiting of pregnancy you have acidosis, toxemia, etc. I should say that forty per cent. of these cases have responded to complete relief of nausea purely with corpus

luteum. I have used rest in bed, forced fluid, dry food and everything else but have felt positive that many of my cases have obtained very great relief from the intravenous administration of corpus luteum.

I have mentioned one case where there was retroflexion and where nausea was relieved by corpus luteum. The retroflexion was relieved after the relief of nausea.

The question of dilatation for sterility is debatable. Some cases undoubtedly respond to dilatation as I believe this one did. This dilatation had been done before she came to me.

It is very important to seriously consider the question of the product. Unless the preparation is definitely recommended for intravenous use it should not be used intravenously.

The psychological effect of the treatment may have something to do with it. If it has and their state of nutrition improves as a result of relief of their neurosis, I consider it a justifiable suggestive procedure.

In answer to Dr. Knappenberger's question, there are in literature a good many articles which tend to prove that corpus luteum preparations given by injection and by mouth have definitely some effect. Popanicon, working in the Cornell laboratories, has found three different types of solutions which seem definitely to have three distinct types of action.

In reply to Dr. Gempel, I first became interested in this preparation after reading an article by J. C. Hirst. This article was on the use of corpus luteum intravenously in vomiting of pregnancy, but no mention was made of its action in producing uterine development. He claims one hundred per cent. relief from nausea by giving six doses of 2 cc. every other day. He mentioned the effect upon the hyperthyroid case and advised against its use in these. I do not blame Dr. Gempel for losing his enthusiasm when trying to treat pernicious vomiting with corpus luteum alone. We need everything we can think of in pernicious vomiting. In Cleveland, where Dr. Gempel worked and where there are many goiters, if one tried the corpus luteum treatment he would probably have a lot of low grade hyperthyroid cases who would not respond.

The principal thing I wanted to bring out in my paper was not relief of vomiting, but the suggestion of the effect of development of uterine muscle. It will take intensive study to prove this.

MULTIPLE RENAL CALCULI REMOVED BY SUCCUSSION.—By DR. CLINTON K. SMITH.

This patient, as you can see, appears to be in good general health at this time. At the time we first saw her, some eight or nine months ago, she entered Mercy Hospital in an extremely emaciated and anemic condition. The history states that she is twelve years of age, has had measles and whooping cough, but otherwise was a fairly normal child until July, 1924. At that time she began to develop considerable pain in the left hip which her mother thought was brought on by injury incident to a fall some time before. Subsequently both legs became swollen and she was unable to move them for several months. From that time until July, 1925, she was practically disabled and several places were opened and drained, principally about the ankles, hip and back. She entered Mercy Hospital in July, 1925, complaining of pain in the left side in the region of the kidney, had been vomiting during the past week and had taken no nourishment. She was greatly emaciated and appeared to be very sick.

Examination at that time disclosed several old, healed sinuses at both ankles, ankylosis of the left hip and a discharging sinus in the back. General supportive treatment was instituted, including heliotherapy and an effort made to clean the discharging sinuses. Since that time she has undergone operation for the removal of diseased bone, and at the present time all the sinuses are closed. Her condition has been diagnosed as a diffuse osteomyelitis. At the present time the orthopedists are waiting to do some rather extensive work on her hip and have been desirous of having her in the best possible condition.

The part I wish to show principally is the kidney condition. As will be noted in the film, shadows can be seen indicating the presence of multiple renal calculi in both kidney pelves. We began treatment for this condition about four months ago, at which time her urine was loaded with pus and infection. We introduced catheters of increasing caliber in the kidney at each sitting, on either side, with the expectation of securing better drainage and improving her general health. Our expectations have been more than realized in that during the past three months she has gained a great deal in weight and has added at least one hundred per cent. to her general health. Her urine is entirely clear from either kidney and we are using catheters, No 12 French, about once every two weeks on either side. As the calculi on the right appeared to be rather small we attempted to bring these down the ureter by filling the kidney pelvis with water, then placing the patient on the opposite side and holding the kidney between the hands, and manipulating it in such a way as to shake the calculi into the outlet of the pelvis, and at the same time withdrawing the water through the catheter by a syringe. This plan has been followed by the passage of five stones, generally about one to two days following treatment. This method is known as succussion removal of ureteral calculi and can be attempted usually in favorable cases. I do not claim any priority in this plan of treatment. I believe if anyone can claim priority for it it is Dr. Bransford Lewis, of Saint Louis. I believe he accidentally stumbled on it through the necessity of treating a patient who was in such a low general condition that he was forced to attempt removal of the stones by this method, or not at all.

You will note in the film that there are two or three stones still remaining in the right pelvis. There are two or three stones also in the opposite side. I think these results are due to the efficiency of proper ureteral drainage in dealing with infected kidneys, or what is usually known as pyelitis. Here is a child whose pelves contain multiple stones and who had a urine loaded with pus and infection, a condition which could hardly be selected with more aggravating circumstances, and with all of this handicap we have been able to secure a clear urine, which I believe is due to what could probably be called unusually good ureteral drainage.

This case clearly illustrates the role played by infection in the formation of calculi, and I believe that in this case the overwhelming general infection is the immediate factor in the formation of these stones, although the patient may have had more or less urinary stasis due to congenital defects.

DISCUSSION

DR. NELSE F. OCKERBLAD: The case Dr. Smith has just presented is an extremely interesting one not only because of the method in which these stones were removed but also because of the depleted condition of this patient. Attempting to remove these

stones by the usual method of pyelotomy before building her system up and getting her in good condition would certainly have resulted disastrously. Unquestionably a great deal of her improvement can be attributed to the fact that these ureters were dilated and the kidneys allowed to return to quite nearly their normal function. Dr. Smith is quite right in insisting that in the presence of stones such as we have here there is always a stricture of the ureter. Whether the stones produce the stricture or the stricture produces the stones is not wholly clear, but we are of the opinion that it is not a coincidence when stones are a frequent accompaniment of stricture of the ureter. The conservative way in which Dr. Smith has handled this case is to be commended.

THE X-RAY IN CARDIAC DIAGNOSIS.

—By DR. G. E. KNAPPENBERGER.

The purpose of this paper is to draw attention to the interesting and valuable data to be obtained by a study of the more common diseases of the heart.

The X-ray method of cardiac diagnosis will not replace the clinical method; it only supplements it. Both methods furnish valuable data and can be used to advantage by the clinician.

Two methods are available for X-ray examination: (1) teleoroentgenology (seven foot plates), (2) fluoroscopy.

Either method yields accurate information, but the plate method is not sufficient alone. It must be combined with fluoroscopy to give an idea of the function as well as the anatomy.

If the fluoroscopic examination is combined with the orthodiagram, a quick convenient permanent record can be made of the actual size and shape of the heart and great vessels.

Orthodiagraphy is the method of drawing an actual sized outline of an object upon the fluoroscopic screen. A specially constructed fluoroscope is necessary, one with a fixed screen and a movable tube. The ray emerges through a small diaphragm to insure the use of parallel rays; the tube is moved from place to place around the object to be recorded, dots are made upon the screen at close intervals until the entire outline is dotted upon the screen. The dots are then joined into a continuous line and transferred to semitransparent paper. Tracings can be made from any angle to record the necessary data. With a little experience the operator becomes quite accurate and the record is as valuable as the radiogram.

A detailed discussion of the various components of a normal cardiac shadow was presented, indicating the various anatomical parts in the antero-posterior, the left anterior oblique and the right anterior oblique positions. The following conditions were discussed by means of orthodiagrams: Left ventricular hypertrophy; left ventricular hypertrophy and dilatation; mitral disease; tricuspid insufficiency and stenosis; chronic nephritis and arterio-sclerotic heart; cor pulmonale; drop heart; aortic enlargement.

It was shown that to a certain degree the various lesions of the heart and aorta presented typical configurations and that this method of examination assisted materially in making a diagnosis. A detailed description of the methods of measuring the aorta was presented, pointing out particularly that aortic enlargement in the beginning portion strongly suggested specific disease, whereas enlargements in the arch could be due either to specific disease or arteriosclerosis.

Normally the right border of the heart is made up of two components, the right auricle and the ascending aorta. The right auricle normally extends about one or two centimeters farther to the right than the ascending aorta. Any enlargement of the ascending aorta disturbs this relationship, the aortic shadow extends as far or even farther to the right than the auricle. This is almost a pathognomonic sign of mesoarteritis.

DISCUSSION

DR. D. S. DANN: I was particularly impressed with the full detailed manner in which Dr. Knappenberger discussed the orthodiagram. He gave some very valuable and interesting information. I can quite see, however, that Dr. Knappenberger has come under the full sway of German influence and has to a great extent neglected some of the American contributions. We in this country feel that we can get the same amount of information as they do on the other side by using the two meter plate and combining that with the fluoroscopic examination. When I first read Dr. Knappenberger's title I thought that we might have a difference of opinion, but I see now that we agree fully, except that in measuring the cardiac shadow Dr. Knappenberger simply confines himself to the orthodiagram. No one in this country who has done work carefully, maintains that the cardiac examination logically should be made solely with the two meter plate. That plate is simply used in measurement and for reference for further examination. I think Dr. Knappenberger showed why the orthodiagram in the majority of cases cannot be used in preference to the seven-foot plate. In the first place it requires special practice and skill, and may be a great source of error. In the orthodiagraphic method that point is determined in the diastole of the heart.

I think Dr. Knappenberger will agree with me when I say that in examination of the same patient from time to time there are at least two, three or four millimeters of difference in measurement and very often it is somewhat difficult to determine accurately certain points.

We have found it useful to use certain measurements on the seven-foot plate. You must remember that in the first place the roentgenological examination of the heart should first include a thorough fluoroscopic examination and Dr. Knappenberger has covered that subject very thoroughly and he has brought out the fact or phase of conditions in the normal shape of the heart as well as the pathological shape of the heart and how to allow for these conditions.

Why do we have a seven-foot plate? If you draw a line through the center of the plate and then determine the widest point to the left and the widest point to the right, the sum of these two gives us the diameter of the cardiac shadow. Perhaps at this point it might be well to say a few things about the normal cardiac shadow. I did not say cardiac area because the projection of the heart to the center plate is not a true cardiac projection of the normal size. These two measurements give the transverse of the heart, in which they show the diameter of the shadow of the heart for a certain definite space.

That is a very valuable method, in so far as percussion is of value. This gives us what we would ordinarily refer to as accurate percussion. If one wishes to find how inaccurate percussion may be at times aside from the inherent difficulties, one has simply to locate the apex beat which may at times be outside the actual cardiac area.

DR. EDWARD H. SKINNER: This has been most in-

teresting. I recall having experienced a similar Attilic touch after a study trip to Vienna. I came back very enthusiastic over the orthodiagraphic method and found little sympathy for it here. The orthodiagraphic method is most successful in the hands of the clinician. I think that the combination of the fluoroscopic inspection of the heart plus the two meter plate is a more satisfactory and comprehensive way of completing the examination. I would feel much more confidence in the measurements of the cardiac outline upon the two meter plate than I would by connecting together several points which I had made by fluoroscopy of the cardiac margins. This is purely mechanical and the argument for the mechanistic method of the two meter plate is almost irrefutable.

We have found in a series of more than 1500 cases of measurements of the heart on the two meter plate that we have been able to provide the clinician with more information. The cardiac index works out with great satisfaction. To one who is thoroughly familiar with the normal and pathologic contours as shown on the screen there may not be the necessity for the cardinal index. But if the expression of a radiologist is demanded, I think the two meter plates are more exact.

Six meter plates may be reproduced in exactly the same position and same exposure. Therefore, exact repetition of the six meter plate at intervals will give you great accuracy without the personal equation.

Dr. KNAPPENBERGER (in closing): In reference to the apparent disagreement as to whether one should make an orthodiagram or a seven-foot plate, I think it is simply a matter of preference. The same information can be obtained by either method. The orthodiagram gives accurate and positive information and is also easy and convenient. One can make accurate notes as to the size and shape of the heart and vessels, and particularly is this true of the aorta.

The question of the cardiothoracic ratio is important to the technician but not particularly so to the clinician. The ratio does not have any particular reference to disease. If we examine a patient we want to know what is the matter with that patient in pathological terms rather than to know about the cardiothoracic ratio. We want to know what particular part of the heart is involved, if the heart is failing in any of its parts, therefore, the shape of the shadow is many times of greater importance than the size.

Dr. Dann brought out a very important point when he said that an error of two to three millimeters in measurements did not make much difference. The shape of the shadow is important, because by this we can deduce just what part of the heart is at fault. Gross errors in measurements of the aorta are to be avoided, but again, a small error is permitted. In a general way, if the aorta is under three centimeters in diameter it is a normal artery. If it is larger it is definitely pathological. The normal size varies from $1\frac{1}{2}$ to 3 centimeters, varying in proportion to the size of the patient.

As was brought out in the paper and commented on by Dr. Krall, the clinician can usually predict what he will find by X-ray. Even so, the method often supplies the key to the situation, often bridges the gap between clinical observation and actual fact and at least stimulates one to more accurate clinical observation.

Meeting of March 8, 1926

STRICTURE OF THE URETER IN

MALES. REPORT OF 31 CASES.—By DR. NELSE F. OCKERBLAD.

Among urologists there is no longer any controversy over stricture of the ureter as a disease entity. The early work of Hunner on ureteral stricture in females led to the idea that this disease was one peculiar to women, but urologists who see a large number of cases are of the opinion that this disorder is just as common in men as in women. Goldstein, Rathbun and others have reported many cases of stricture of the ureter in males. While it is true that stricture of the ureter frequently causes changes in the kidney, pelvis and ureter, which we recognize as dilatations or distortion, one cannot say that because these changes cannot be shown on the X-ray plate no stricture is present.

The association of stone and stricture is one that cannot be lightly passed over, for it would seem that while a calculus may produce a stricture of the ureter, a stricture may possibly be responsible for a calcareous deposit. In one of my cases I removed a small stone from the lower end of the left ureter by manipulation and there was at that time no evidence of a stricture. Two years later this patient again had a stone in the left ureter and this time there was a very obstinate filiform stricture present which we were able to dilate to No. 12 F only after three operations.

In 10 of the 31 cases the stricture was so small that a wax bulb would not pass and filiforms were resorted to, several of them being inserted in the ureter at one time and this advantage followed by a small Kelly with a stilet in it. In these cases the ureter would grip the catheter with a grasp described as "harness leather grasp," which is so well known in urethral stricture. When an operator encounters this sort of stricture there is no longer a doubt in his mind as to the existence of a stricture of the ureter. It is in this kind of case that the most brilliant results are obtained by proper dilation. Age does not seem to be a factor in the disease. The youngest was three years old, the oldest seventy-four years.

SYMPTOMS

There is no one symptom or set of symptoms pathognomonic of stricture of the ureter. Pain is the one outstanding symptom, but differs so much in intensity and character one cannot say that this or that pain is typical of the pain caused by ureteral stricture. The frequent reflex gastrointestinal disturbance in ureteral disease complicates the picture and it is not difficult to understand why these patients have so often "gone the rounds" before seeing some one who recognized the possibility of a ureteral lesion.

URINARY FINDINGS AND FUNCTIONAL TESTS

Twelve had normal urines, 21 had hematuria, and of the remainder 6 had large amounts of pus. Eleven had either a few pus cells or pus in the urine at certain times only. Ten had microscopic blood. Functional tests which consisted of the creatinine tolerance (Major), and phenolsulphonphthalein, were made in each case. Eleven showed normal values, 20 showed damage to one or both kidneys of greater or lesser degree. Blood chemistry studies were carried out in 20, but all were within normal limits except 2 cases.

LOCATION OF THE STRICTURES

The bulb and the ureterogram are the instruments by which the location is determined. The ureterogram, properly made, is a distinct aid, but it is not infallible. Filiform strictures, which hug the

catheter or bougie, are sometimes the most difficult to locate with precision, but the ureterogram often shows them to be several centimeters in length.

PSYCHOLOGICAL FACTORS

It is not easy to discuss this subject because there is too much conjecture and too little experimental evidence. Clinical evidence would go to show that focal infections play an important part. In 9 of the cases teeth and tonsils were found to be a foci of infection.

TREATMENT

The present method of dealing with the stricture of the ureter is not very complicated and consists of dilatations with increasingly larger bougies or catheters in the same way that the ureteral stricture is dilated. Silver salts or dye substances are made use of to help clear up or keep down infection. Removal of any focus of infection is of course part of the program. As a rule strictures which do not stay dilated must be looked upon with suspicion for they are invariably tuberculous in origin.

RESULTS

In 16 of these cases the term "cured" could not be applied to the result. In these cases the pain and dysuria disappear rapidly after dilatation and the patient quickly recovered sound health. In 5 cases we applied the term "improved." One died, 3 refused treatment, 6 were unimproved. In 2 the hypertension was relieved for a time at least. An encouraging feature in this study is that we are recognizing this disease and we have a method of treatment, which in this series shows 51 per cent. cured.

DISCUSSION

DR. CLINTON K. SMITH: I wish to congratulate Doctor Ockerblad on being able to show so many unusually interesting films. The subject of stricture of the ureter has come to the place in urological meetings where it has resolved into a good free-for-all fight, whereas several years ago it was regarded mostly as a burlesque performance by Hunner. Urologists did not seriously consider stricture of the ureter. Today the situation has changed and most men in urology not only are convinced that ureteral stricture is a real condition, but have become sufficiently enthusiastic about it to precipitate a good fight in any meeting where sufficient opposition is exhibited.

The kidneys Doctor Ockerblad has shown are most of them more or less of an end result; they are the class of kidney that has previously been called "pus" kidney or "surgical" kidney and so frequently removed by the general surgeon. Today we know that most of these kidneys could have been saved. We have had to demonstrate this because of the fact that in such cases the situation is usually bilateral although the opposite side may not be showing symptoms, and consequently we are called on to treat the remaining kidney in a patient who has been previously nephrectomized. We have only one course to pursue and that is to attempt to make the best of a bad situation. We have found that we have been able to deal with these remaining kidneys in as critical a condition as the one which had been removed, and we conclude that we are able to do something with the kidney before it is removed, if given the opportunity.

There is considerable argument as to the percentage of strictures of the ureter in men or in women. I think it makes a difference whether a urologist is seeing more men or more women. I

believe that the situation is fairly well balanced. Personally, I think I see slightly more in women than in men.

The etiology of stricture is still a very young subject which has not been thoroughly worked out. There is no doubt but that focal infection has a great deal to do with the development of stricture, but whether or not it is the underlying cause is still open to much argument.

Time does not permit me to go into detail regarding our pyelographic autopsy studies at Mercy Hospital in children, but I will say that these studies indicate that much irregular narrowness of the ureter exists from birth and that in those children with upper urinary tract infections who do not recover promptly on internal medication, we find consistently that ureteral stricture is present. I am thoroughly inclined to the idea that focal infection plays a part when implanted on more or less congenital abnormalities of the ureter.

The cases of stricture of the ureter which tax our faith in our opinion on the subject are those with a normal urine in which cystoscopic examination of the bladder shows nothing to account for the patient's symptoms of frequency and dysuria. A goodly number of these patients have no pain in the region of the ureter but only the bladder symptoms; but if a careful history is taken and the case carefully gone into we can usually arrive at a probable diagnosis at least by process of elimination, and calibration of the ureter by bulbs usually discloses stricture, which if judiciously dilated usually responds favorably.

I wish to say a word regarding the necessary equipment for examining and treating these cases, and that is that the old "garden variety" of Brown-Berger equipment which has been used for routine cystoscopic work is wholly inadequate in managing these cases. The operator who attempts to examine and treat these lesions with such equipment is as hopelessly lost as the hunter who attempts to go after grizzly bear with an air rifle, because these ureters must be dilated often to 16 French caliber before relief is obtained, and this can only be done with the open Kelley tube or with the more recently devised pan-endoscope of McCarthy.

I wish to show two slides illustrating these lesions in the male. One in a man of about thirty years of age, whose symptoms have been periodical attacks of pain with frequency. The ureter has definite constriction about the iliac crossing, with definite dilatation above.

The other slide is that of a male child, age twelve years, whose symptoms have been periodical attacks of fever with slight bladder disturbance. There is much dilatation of the kidney pelvis above the constriction. In fact, the kidney is practically wrecked.

This brings us to the point of considering these lesions in children, and in conclusion, I wish to say that I am of the opinion that most of these cases such as Doctor Ockerblad has shown really had their beginning in early life, and that if their symptoms could have been properly interpreted and treatment instituted at an early date, much of the end results which he has shown could have been avoided.

DISCUSSION

DR. B. L. MYERS: We have had a few cases of stricture of the ureter which have impressed upon us the importance of caring for them before damage is done the kidney. One was a gardener who came from out in the state, complaining of pain in his left side, mostly in the lumbar region. Careful consideration of his spine and intestinal tract threw no

light on the problem. Cystoscopy and functional tests revealed that he was passing little urine on the left and practically no phenolsulphonephthalein, while the right kidney was doing good work. After a couple of dilatations of the ureter the left kidney was doing almost as much work in fluid and solid production as the right.

Later a lady came under our care who also had pain in the left side of the abdomen. When we first saw her she gave a history of the presence of the same pain periodically from girlhood. In the meantime she has been married and passed through three pregnancies without important renal disturbances. She had been seen by several doctors none of whom apparently ever placed the blame on the kidney. At the visit at the home the case was suspected as a probable case of ureteral obstruction. Cystoscopy, split function tests, and pyelogram at the hospital, elicited that there was only a slight amount of purulent urine obtainable, no P. S. P. elimination, an enlarged kidney, and constrictions of the ureter with interposing dilatations. The other kidney was doing practically double work, so that the patient was considered a good risk for operation and an abscessed kidney was removed.

It seems fair to assume that years ago this patient may have had an obstructed urinary flow like the first patient mentioned, and if her ureteral strictures had been relieved early her kidney might have been saved, as well as that of the first case I have cited. We should all be alert, not only to detect strictures of the ureter, but to diagnose and relieve them before lasting damage has been done by the obstruction.

Another case impressed us because of the prominence of gastric symptoms. The patient had indigestion and vomiting and was accustomed to wash his stomach by using a stomach tube. A careful study of the intestinal tract showed the gastric fluids normal and no detectable pathology by X-ray and fluoroscopic studies. He was cystoscoped and stricture of the right ureter dilated. After each dilatation the patient would have a period of gastric relief. It reminded us of the observation expressed by some one that "the stomach is the worst old liar in the human body."

DR. NELSE F. OCKERBLAD (in closing): Dr. Aschman's question is not on the same subject, being rather that of the so-called pyelitis of pregnancy which in some instances is undoubtedly due to ureteral stricture.

Dr. Smith has shown that these strictures are often congenital or begin in early infancy. For treatment of ureteral stricture large catheters and bougies are necessary.

CHOLECYSTOGRAPHY.—By DR. E. H. SKINNER AND DR. IRA H. LOCKWOOD.

After relating the origin and crowded history of this recent X-ray development in gallbladder diagnosis, Dr. Skinner reported upon the use of sodium tetraiodophenolphthalein in three hundred cases by the oral method of administration. The amount of dye stuff has never been more than ten keratin coated capsules of 0.25 gm. each, and in small women as few as six pills have been sufficient. Fully 25 per cent, exhibited symptoms of nausea, vomiting or diarrhea but these symptoms were only temporary and did not interfere with the successful achievement of gallbladder shadows. These undesirable symptoms were usually in patients who recorded positive gallbladder pathology and gave histories of frequent or continuous periods of gastric distress. In spite of

such gastrointestinal displays, good gallbladder shadows were secured.

Contrary to many preceding reports in the literature, negative gall stone shadows were rarely obtained and the failure of the gallbladder to offer opaque shadows is not always to be interpreted as pathological evidence.

The liver secretes bile continuously into its ducts at a pressure of 60-70 mm. The sphincter Oddi acts as the "keeper of the gate" for when it is unrelaxed it offers a sufficient resistance (120-130 mm.) to shunt the bile into the gallbladder. This is made possible by the fact that the pressure within the gallbladder is lower during expiration (30-35 mm.) than the pressure existing normally in the common duct (60-70 mm.). At inspiration, with the sphincters still unrelaxed, the increased intra-abdominal pressure raises the pressure in the gallbladder and some vesical bile, if there is no obstruction of the cystic duct, flows into the common duct. There takes place then an ebb and flow of bile between the gallbladder and the common duct when the sphincter is closed. When the sphincter of Oddi is somewhat relaxed by gastric chyme or the intra-abdominal pressure changes, bile is apparently squeezed from the gallbladder into the duodenum. The technique of giving the gallbladder dye stuff was described.

DISCUSSION

DR. J. L. McDERMOTT: I want to congratulate Dr. Lockwood on this demonstration of gallbladder visualization. This method of examination is comparatively new and has not yet come unto its own. In principle it resembles the opaque meal in gastrointestinal examinations, and I hope its development will be as great and as helpful in gallbladder examinations as has been the opaque meal in stomach examinations.

Cholecystography is a functional test, but in addition it also gives us the size, shape and location of the gallbladder. Before the use of the opaque meal we were taught that the position of the stomach in the living was as we found it post mortem, but the fluoroscope has exploded this error. If the cholecystogram in questionable cases reveals a normal gallbladder shadow this in itself is a distinct advantage to the internist and the surgeon. If the shadow is faint or indefinite the examination may be repeated. I have examined cases where the shadow was faint, and in some cases absent, but on re-examination good, well defined shadows were obtained. In the cases giving negative results, we can always resort to the intravenous method as a check. Dr. Graham thinks that the oral method is practically worthless, but that the intravenous method has proven accurate in more than 96 per cent. of the cases. No doubt the intravenous method is more accurate than the oral method at the present time, but this may be due to the fact that the former has been scientifically worked out while the latter is in the stage of experimentation.

We hope that a technique will be worked out which will justify the general use of the oral method, as it is simpler and is fraught with fewer dangerous complications.

Cholecystography in addition to shedding light on the function of gallbladder, has demonstrated that the nonsurgical drainage of the gallbladder by Epsom salts has been a delusion and a snare, as we now positively know that the giving of a small fatty meal will accelerate the drainage of the gallbladder much more effectively than salts.

As to the sickness following the taking of the dye, I believe the various workers have found about

the same percentages although there is a lack of harmony among the writers as to the cause of this sickness. Some attribute it to a variation of the physiology of the gastro-intestinal tract, and one writer from St. Louis lays great stress on the hydrochloric acid content of the stomach as being a determining factor. He claims that patients having a hyperacidity are more likely to have dissolution of the capsules followed by nausea, vomiting and diarrhea, and failure of absorption of the dye than those having a low acid content. In my personal experience I have examined two patients with pernicious anemia who had no free hydrochloric acid, and these patients suffered violently from nausea, vomiting and diarrhea.

DR. D. S. DANN: I would like to call attention to one fact and that is reports of normal gallbladders, when the abdomen is opened, after a pathological report has been made by X-ray. I have noticed a number of reports in literature, especially by Morre, in which that sort of statement was made. I do not make the statement in a derogatory sense toward the surgeon. Negative gallbladder was the diagnosis. That patient later on still had the same symptoms and subsequently the gallbladder was taken out and the pathological report was made histologically. We should remember that positive information is obtained by the X-ray and at the same time some idea about physiological activity. We thus obtain better information than we could from palpation or histological examination.

I might state from my own experience that I also am not satisfied with the oral administration of the dye, because of the reactions obtained. I think the time will come when we will have another substance that will be more satisfactory.

DR. SKINNER (in closing): This new X-ray examination is a study of the function of the gallbladder. So far as the anatomy of the gallbladder and its position is concerned, I do not think that the X-ray findings amount to more than opaque meal findings upon the position of the stomach. The position and contours of abdominal organs are subject to great variation depending upon the stature and tonus of the individual. I think the dumb-bell shape of the gallbladder may be interpreted with some degree of assurance. We have now had about three hundred cases with very few contour changes. We have had very few cases providing negative stone shadows.

Our experience with the oral method has been so satisfactory that we rarely suggest the intravenous method. The features of the visualization test are the degree of absorption of the dye, the degree of concentration in the gallbladder, the rapidity of filling, the contractility of the filled gallbladder after a fatty meal and the persistence of the dye stuff in the gallbladder.

CASS COUNTY MEDICAL SOCIETY

The regular meeting of the Cass County Medical Society was held in Pleasant Hill, Thursday, September 9, at 1:30 p. m. District members were guests of the society. Following the business meeting, a scientific program of great merit was presented as follows:

"Modern Obstetrical Procedures," by Dr. M. A. Hanna, Kansas City. Dr. Hanna gave a detailed discussion of the problems most frequently met with in obstetrical practice. Newer methods, and practices were discussed, however there was a conservative attitude taken toward many of the newer

unproven methods. This paper was fully discussed and many questions were raised regarding the same.

Dr. G. Leonard Harrington, of Kansas City, Mo., followed Dr. Hanna with a "Discussion on Psychoanalysis." Dr. Harrington brought forth many facts and points in his talk which were entirely new to most of the members present. Many points were brought out and many questions were raised, especially by members of the Ladies' Auxiliary.

Dr. Emmett P. North, of St. Louis, Mo., was present. Dr. E. J. Goodwin, of St. Louis, also expected to be present but because of sickness was unable to come.

Dr. North brought out many new points in a discussion of "The Economic Condition Relative to the Medical Profession." The County Health Unit was discussed, also the new Proposed Medical Practice Act for the State of Missouri.

A motion was made and carried, that the Cass County Medical Society endorse the Proposed Medical Practice Act for the State of Missouri.

Dr. North closed his talk by paying tribute to Dr. M. P. Overholser, of Harrisonville, and to his work in the medical profession.

Due to the heavy rains and the condition of the roads in the district, not as many members were present as had expected to be.

Following the medical program, members of the societies and their guests were most graciously entertained at the home of Dr. and Mrs. A. H. Baldwin with a picnic supper, served by the members of the Ladies' Auxiliary.

DR. H. A. BRIERLY, President.
DR. W. L. VEIRS, Secretary.

CRAWFORD COUNTY MEDICAL SOCIETY

The annual meeting of the Crawford County Medical Society was held October 19, in the offices of Dr. W. J. Parker, Steelville, with the president, Dr. Gustav G. A. Herzog, in the chair. The following were present: Dr. Gustav G. A. Herzog, president; Dr. W. J. Parker, secretary; and Drs. Wm. G. Henderson, R. P. Roysse, A. S. McFarland, D. J. Walter, A. L. Barnard. The meeting was called to order by the president, who delivered an address of welcome. The minutes of the last meeting were read and approved.

There were a number of clinics before the society.

A paper presented by Dr. Wm. G. Henderson, of Cuba, on "Eclampsia" was very interesting, setting out in detail the diagnosis and prognosis of eclampsia. The discussion that followed added and brought out much of an interesting nature.

Dr. W. J. Parker presented a splendid paper on a new treatment of pneumonia.

There were also addresses by Dr. Roysse, of Bourbon; Dr. McFarland, of Rolla; Dr. Barnard, of Steelville, and others.

Among resolutions adopted was a schedule of prices obligating each doctor belonging to the Society to charge the same rates for services.

Dr. Roysse was unanimously chosen president for the ensuing year and Dr. Parker, secretary.

Altogether it was one of the best meetings held by the Society in years.

The Society will hold meetings every three months.
W. J. PARKER, M.D., Secretary.

HOLT COUNTY MEDICAL SOCIETY

The October meeting of the Society was held in the office of the President, Dr. F. E. Bullock, Forest City, October 7, with Dr. Bullock in the chair. The meetings are being held the first Thursday in each month since January, 1926, instead of quarterly as

heretofore. The meetings are held in various towns throughout the county where there are members of the Society residing. By coming together once a month it is found that better feeling prevails and greater interest is shown in the program.

A symposium on "Heart Disease" was taken up for discussion at the last meeting, Dr. J. F. Chandler, of Oregon, presenting a paper, "Some Causes of Heart Disease Other Than Infections"; and Dr. F. E. Bullock, of Forest City, discussed "Infection as a Cause of Disease of the Heart."

Next meeting of the Society will take place at Oregon, November 7.

JNO. F. CHANDLER, M.D., Secretary-treasurer.

LAFAYETTE COUNTY MEDICAL SOCIETY

Lafayette County Medical Society met at Higginsville, October 5, and was called to order by the President, Dr. Lewis Carthrae, Jr. The minutes of the last meeting were read and approved. The following program was presented:

Case Record of the Massachusetts General Hospital. Discussion opened by Dr. D. R. Griffith, Bates City.

"Treatment of Heart Diseases," by Dr. Lewis Carthrae, Jr., Corder. Discussion opened by Dr. W. C. Webb, Higginsville.

"Prenatal, Natal and Postnatal Care," by Dr. Edmund Lissack, Concordia. Discussion opened by Dr. W. E. Koppenbrink, Higginsville.

The application of Dr. John B. Willis, Mayview, for membership in the society was approved and he was elected.

On motion, seconded and adopted, the society approved the proposed amendments to the Medical Practice Act.

On motion, seconded and adopted, an invitation was extended to the Saline and Cooper County Societies to meet with us in Higginsville, October 26. This meeting is to be jointly with the Postgraduate Extension Course and the Maternal Welfare Course. Speakers from each committee are to be procured. Dr. Ryland was placed in charge of making all necessary arrangements in cooperation with the secretary and president.

Drs. Schooley, Martin and Liston were appointed by the president to draw up resolutions on the death of Dr. John W. Lightner.

Other miscellaneous and minor business and announcements were brought before the society and acted upon.

LEWIS CARTHRAE, JR., M.D., President.
EDMUND LISSACK, M.D., Secretary.

SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Fiftieth Annual Meeting of the Southeast Missouri Medical Association was held in Cape Girardeau, October 12, 13, with a large attendance of members and visitors. The sessions were held in the court house, a splendid building erected on a hill overlooking the mighty Mississippi as it sweeps majestically on towards the Gulf.

The program for the meeting was unusually meritorious and the discussions of the papers full and vigorous. The presence of a number of prominent visiting physicians who actively entered into the proceedings with both papers and discussions added much to the enthusiastic interest and value of the sessions. There was "meat" for everybody free for the taking.

The open meeting on Tuesday evening proved especially attractive and instructive. A large orchestra from the city high schools rendered a num-

ber of splendid musical selections, after which Rev. H. C. Hoy welcomed the Association to Cape Girardeau. Dr. B. W. Hays, of Jackson, responded for the Association, followed immediately by the President's Address by Dr. D. H. Hope, of Cape Girardeau, in which he enumerated some of the more notable advances in medical science in recent years.

After the President's Address, Dr. A. G. Pohlman, of St. Louis, delivered a fine lecture on "Conservation of Health," and was followed by Dr. A. C. Nickel, of the Mayo Clinic, with a paper on "Focal Infection," with particular reference to bad teeth, which he demonstrated by lantern slides, a feature of especial interest to the large number of laymen present, as well as to the doctors.

Quite a number of physicians made application for membership at the Wednesday morning session and were entered on the rolls, giving us a membership well over a hundred, but there is still room for many more if we would render the fullest possible service to this part of the state.

After a spirited contest and many flowery speeches, Poplar Bluff was selected as the place for the next meeting, to be held the first Tuesday and Wednesday in October, 1927.

Officers for 1927 were elected as follows: President, Dr. Jas. R. Lee, Charleston; vice president, Dr. Chandler, Lutesville; corresponding secretary, Dr. E. J. Nienstedt, Blodgett; recording secretary, Dr. W. S. Love, Charleston; treasurer, Dr. W. R. Goodycoontz, Desloge.

The following papers were read:

"Empyema," by Dr. L. D. Denton, Braggadocio.

"Endarteritis Obliterans, With Presentation of Patients," by Dr. A. H. Hamel, St. Louis.

"Tularemia, With Case Report," by Dr. L. O. Rhodes, Sikeston.

"Eclampsia and Its Treatment," by Dr. R. C. Kitchell, Ironton.

"Our Mutual Responsibilities in the Conservation of Health," by Dr. Augustus G. Pohlman, St. Louis.

"Diagnosis and Treatment of Prostatic Hypertrophy," by Dr. Neil Moore, St. Louis.

"Infection of Paranasal Sinuses, With Radiographic and Operative Findings," by Dr. W. C. Dieckman, Dexter.

"Foreign Bodies in Air and Food Passages," by Dr. E. Lee Myers, St. Louis.

"Obstruction of Esophagus, With Report of Two Cases," by Dr. Carl A. W. Zimmermann, Cape Girardeau.

"Diagnosis and Surgical Therapy of Mesenteric Lymphadenitis," by Dr. W. H. Wescoat, Oran.

"Acute Intestinal Obstruction," by Dr. M. L. Cone, Campbell.

"Cesarean Section, With Case Report," by Dr. O. L. Seabaugh, Cape Girardeau.

"Early Diagnosis and Treatment of Ear, Nose and Throat Diseases," by Dr. W. G. Patton, St. Louis.

"Scarlet Fever and LaGrippe Complications of the Mastoid; Report of Cases," by Dr. W. D. Black, St. Louis.

"Some Sequels of Foci of Infections as Seen in Patients and Experimental Animals," by Dr. A. C. Nickel, Rochester, Minn.

W. S. LOVE, M.D.

TWELFTH COUNCILOR DISTRICT MEDICAL SOCIETY

The Twelfth Councilor District Medical Society held a meeting at the Snapp Hotel, Excelsior Springs, September 30. This is the first meeting that the Society has held since the sessions were discontinued when we entered the World War. Dr. Spence Redman, Councilor of the District, called

the meeting to order and Dr. F. H. Matthews, Liberty, acted as secretary. About twenty five attended the meeting. The following papers were read and brought forth a very interesting discussion:

"Ambulant Treatment of Hemorrhoids," by Dr. J. J. Gaines, Excelsior Springs.

"Diabetes Millitus," by Dr. E. E. Peterson, Nashua.

"Tetany," by Dr. W. H. Goodson, Liberty.

Dr. E. J. Goodwin, Secretary of the State Medical Association, was a guest at the meeting and explained to the members the propositions to be introduced at the next session of the legislature amending the medical practice act. On motion, these amendments were approved by the Society.

The Twelfth Councilor District Medical Society has a splendid history. Its meetings in Clay, Platte, Clinton, Ray, Caldwell and Daviess counties in past years have been noteworthy.

F. H. MATTHEWS, M.D., Secretary.

WOMEN'S AUXILIARY

OFFICERS 1925-1926

President, Mrs. A. B. McGlothlan, St. Joseph.
President-Elect, Mrs. W. M. Bickford, Marshall.
Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

1st Vice President, Mrs. A. W. McAlester, Kansas City.

2nd Vice President, Mrs. Archer O'Reilly, St. Louis.

3rd Vice President, Mrs. M. P. Neal, Columbia.

4th Vice President, Mrs. Wm. Spaulding, Poplar Bluff.

Corresponding Secretary, Mrs. H. S. Conrad, St. Joseph.

Recording Secretary, Mrs. M. A. Hanna, Kansas City.

Treasurer, Mrs. C. T. Ryland, Lexington.

Directors: Mrs. Guy L. Noyes, Columbia; Mrs. Leland Boogher, St. Louis; Mrs. Geo. H. Hoxie, Kansas City; Mrs. Frank Hinchey, St. Louis; Mrs. Walter Baumgarten, St. Louis; Mrs. M. P. Overholser, Harrisonville; Mrs. H. F. Parker, Warrensburg; Mrs. R. W. Berrey, Mexico; Mrs. J. G. Montgomery, Kansas City; Mrs. W. F. O'Malley, Webster Groves.

BUCHANAN COUNTY

The Women's Auxiliary of Buchanan County holds no meetings during the summer months. At the May meeting it was again voted to place Hygeia in the rural schools of Buchanan County. This splendid health magazine has accordingly been sent to every teacher in rural Buchanan County during the school term, one hundred six subscriptions in all. At the last meeting of the Buchanan County Medical Society sufficient money was appropriated from the society's exchequer to send three hundred ten subscriptions to Hygeia to teachers in our city's public and parochial schools during the school term. In Buchanan County, we believe that there is no more effective method of disseminating public health information than by placing Hygeia in the hands of teachers and mothers.

The opening meeting of the season was a tea held at the home of Mrs. A. B. McGlothlan, given by Mrs. McGlothlan, the retiring president, and Mrs. J. F. Owens, the new president of the Auxiliary. About fifty members attended.

CASS COUNTY AUXILIARY

The Women's Auxiliary of the Cass County Medical Society held their June meeting in the hospitable home of Mrs. M. P. Overholser, Harrisonville.

The attendance was gratifying, as not only a good representation of members attended but several ladies from the Henry County Auxiliary and a number from Johnson County, headed by Mrs. Parker, their enthusiastic president.

After the regular business meeting, interesting reports were given of the Dallas and St. Louis meetings by Mrs. Overholser, followed by general discussion of subjects of special interest to the Auxiliary.

At the close of the meeting, a picnic supper on the beautiful lawn of the Overholser home was enjoyed by the Auxiliary, the Medical Society and guests.

The September meeting was held in Pleasant Hill, where we enjoyed the rare treat of attending the splendid program of the Medical Society.

After adjournment, the doctors and wives drove to the home of Dr. and Mrs. A. H. Baldwin where, after a brief business session and social hour, the Auxiliary again served a bountiful supper.

This social feature is stressed only at the June and September meetings; however, it meets the hearty approval of the members of the Medical Society and their attendance has improved since the organization of the Auxiliary.

One of the outstanding features of our work was the presentation of "The Use of Hygeia in the School Room" by our Secretary, Mrs. H. A. Brierly to the Cass County Teachers' Association in September. Mrs. Brierly illustrated in a clear manner how Hygeia could be used to correlate health teaching with other subjects and judging by the enthusiasm of the teachers, it is hoped that henceforth Hygeia will be widely read in the schools and homes of our county.

JACKSON COUNTY

Through the courtesy of the Kansas City Clinical Society, the Women's Auxiliary to the Jackson County Medical Society held their October meeting during Clinical Conference Week. The meeting was held at two o'clock, Wednesday afternoon, at the Kansas City Art Institute.

Miss Kellar, director of lay education to the Illinois State Medical Society, was the speaker of the afternoon. Her subject was "Helping the Wheels of Progress." She spoke of the special work and the purpose of the Auxiliary. Miss Kellar is a delightful speaker; her talk was most interesting and helpful.

Two hundred and fifty women were present. The following state officers were present: Mrs. A. B. McGlothlan, Mrs. W. M. Bickford, Mrs. M. P. Overholser, Mrs. M. A. Hanna, Mrs. C. T. Ryland.

Women from Texas, Oklahoma, Kansas, Iowa and Missouri attended the meeting. Tea was served and a very delightful social time followed.

SALINE COUNTY

The Saline County Medical Society and Women's Auxiliary were invited to Arrow Rock for the June meeting as guests of the Cooper County Medical Society. The dinner was held at the famous "Old Tavern" which has just been remodelled by the D. A. R.'s of Missouri. Dr. McGuire acted as toastmaster. The talks were on methods of lay education. No meeting was held in July because so many of the members were away on vacation.

In August, the Saline County Medical Society invited its Women's Auxiliary, the Cooper County Medical Society and the wives of the men of this society, the Lafayette County Medical Society and its Women's Auxiliary to be their guests at a dinner at the Old Tavern in Arrow Rock. Dr. Jabez Jackson, President-Elect of the American Medical Association, was the speaker of the evening.

The September meeting was held at the Marshall Country Club when the Medical Society and Auxiliary were guests of Dr. and Mrs. Wallace M. Bickford at a noonday luncheon. Dr. A. F. Coffman was toastmaster. Mrs. Geo. H. Hoxie, Kansas City, gave a splendid talk; Dr. Homer Shelden, Kansas City, talked on "The Care of Children's Teeth"; Dr. Fred Kyger, Kansas City, had for his subject, "Abnormal Deliveries"; Dr. D. F. Manning, Marshall, newly elected president of the Tri-County Medical Society, outlined plans for the coming year; Dr. Geo. H. Hoxie, Kansas City, made a public health talk and appealed to the doctors and women of the Auxiliary to promote more educational work in our public schools. The Medical Society then held their business meeting in the sun room and the Auxiliary retired to the club room for its meeting, Mrs. S. P. Simmons, First Vice President, presiding.

It was voted to ask the Chamber of Commerce to hold a Child Health Conference as a part of the annual fall festival. It was also voted to go on record as favoring a county health unit and to make every effort to assist the Red Cross in establishing a unit in Saline County early in 1927. Mrs. H. R. Conway and Mrs. D. F. Manning were appointed to confer with Mrs. Crocft, superintendent of the hospital, with reference to purchasing furniture for the nurses' sun room. The remainder of the afternoon was spent on the club grounds.

The Chamber of Commerce consented to sponsor a Child Health Conference as requested by the Auxiliary. At the time this report is being written, Dr. Irl Krause and Miss Pearl McIvers, of the Division of Child Hygiene of the State Board of Health, are in Marshall conducting a well-organized conference. Miss Annie Thompson, R. N., was appointed general chairman of the conference. She left nothing undone and we feel the conference has been a decided success. The first two days eighty children were examined, the third day will be the big day as all the town and rural schools will be discussed.

MRS. C. L. LAWLESS, President,
MRS. D. F. MANNING, Secretary.

BOOK REVIEWS

NEPHRITIS. By Herman Elwyn, M.D. Assistant Visiting Physician, Gouverneur Hospital, New York, N. Y. New York. The Macmillan Company. 1926. Price, \$5.00.

Considering the notable advances that have been made in recent years in our knowledge of the minute anatomy and physiology of the kidney and in blood chemistry, we feel this is a most timely work to put into the hands of the medical practitioner. Nephritis is a broad subject and its study includes the understanding of such conditions as hypertension, uremia and arteriosclerosis, all of which are discussed at length.

Since the time of Bright, discussion has raged between the pathologist and the clinician as to the classification of the various forms of nephritis. The author has come to the older view of the pathologist and recognizes the glomerulus as the important unit in establishing a basis for classification. The old

terms parenchymatous and interstitial nephritis have been discarded. Neither does the author hold to a Volstead etiology of renal disease or arteriosclerosis. We recommend the book. R. L. T.

THE INTERNATIONAL MEDICAL ANNUAL. A year book of treatment and practitioner's index. Forty-fourth year. 1926. New York. William Wood and Company. \$6.00.

This book is printed in England and contains for the most part the work of British writers but there are some representatives of America. Thus, we see Edmund Andrews and E. Wylls Andrews, of Chicago, and A. W. Adson, of the Mayo Clinic. The rest of the authors are scattered pretty generally about the British Isles.

It is a book of 555 pages, octavo, with illustrations taken from the various medical journals and textbooks of the year.

The work is well done; the collections have been made with conservatism, yet seem to have secured good representation both from writings in the English language as well as those from French and German.

Its value lies in recalling to one's mind the publications of the year, which might otherwise have escaped one's notice. G. H. H.

ROENTGEN INTERPRETATION. A Manual for Students and Practitioners. By George W. Holmes, M.D., Roentgenologist to the Massachusetts General Hospital and Assistant Professor of Roentgenology, Harvard Medical School, and Howard E. Ruggles, M.D., Roentgenologist to the University of California Hospital and Clinical Professor of Roentgenology, University of California Medical School. Third Edition. Revised. With 266 Illustrations. Lea & Febiger. Philadelphia and New York. 1926. Price, \$5.00.

The third edition of this book shows considerable improvement over the first edition and is about one third increased in size. This book is not aimed to be a complete exposition of the subject but is designed as a handy manual for the physician who does his own X-ray work. As such it is a concise and well arranged reference book. Convenient tables, such as time of appearance of centers of ossification and guides to the measurement of the normal heart, are included in the text. The illustrations are well chosen and as good as textbook illustrations of X-ray films usually are. While the work is not supposed to more than outline a given subject, we feel that more attention than two scant paragraphs could have been given to the Graham method of gallbladder visualization. R. L. T.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

AMPULES RADIUM CHLORIDE, 2 cc.—United States Radium Corp. (radium element, 50 micrograms).—For a discussion of the actions, uses and dosage of radium chloride, see New and Nonofficial Remedies, 1926, p. 302, "Radium and Radium Salts." United States Radium Corp., New York.

IPRAL.—Calcium ethylisopropylbarbiturate. —Ipral has the therapeutic properties of barbituric acid, but it is soluble in water and is absorbed promptly. It is claimed that it is excreted rapidly, but some action persists for twenty-four hours. Ipral is used as a hypnotic to combat restlessness, irritability and sleep-

lessness. It is marketed in 2 grain tablets only. E. R. Squibb & Sons, New York.

AMPULES RADIUM CHLORIDE, 2 cc.—United States Radium Corp. (radium element, 2 micrograms). For Drinking Use.—For a discussion of the internal use of radium chloride, see New and Nonofficial Remedies, 1926, p. 302, "Radium and Radium Salts." United States Radium Corp., New York. (*Jour. A. M. A.*, Oct. 2, 1926, p. 1127.)

OVARIAN SUBSTANCE SOLUBLE EXTRACT—P. D. & Co.—A solution of an extract of desiccated beef and hog ovaries in physiological solution of sodium chloride, each cc. containing 0.04 Gm. of soluble extract. The actions and uses of ovary preparations are discussed in New and Nonofficial Remedies, 1926, p. 269. The product is marketed in 1 cc. ampules. Parke, Davis & Co., Detroit. (*Jour. A. M. A.*, Oct. 16, 1926, p. 1303.)

PERTUSSIS VACCINE—Lilly.—(New and Nonofficial Remedies, 1926, p. 352). This product is also marketed in single 5 cc. vial packages containing 5,000 million killed bacteria per cc. Eli Lilly & Co., Indianapolis.

SCARLET FEVER STREPTOCOCCUS ANTITOXIN—Lilly (Refined and Concentrated).—(New and Nonofficial Remedies, 1926, p. 332). This product is also marketed in packages of one syringe (prophylactic dose) containing sufficient antitoxin to neutralize 150,000 skin test units. Eli Lilly & Co., Indianapolis.

SCARLET FEVER STREPTOCOCCUS ANTITOXIN CONCENTRATED—Mulford.—(*Jour. A. M. A.*, May 8, 1926, p. 1440).—This product is also marketed in single 1 cc. vial packages (for the diagnostic blanching test) containing sufficient scarlet fever antitoxin for five tests. H. K. Mulford Co., Philadelphia. (*Jour. A. M. A.*, Oct. 23, 1926, p. 1393.)

POLLEN EXTRACTS—Mulford.—In addition to the Pollen Extracts—Mulford described in New and Nonofficial Remedies, 1926, p. 33, the following products, marketed in 5 cc. vials containing 500 units per cc., have been accepted: High Ragweed Pollen Extract—Mulford; Low Ragweed Pollen Extract—Mulford; Water Hemp Pollen Extract—Mulford; also the following products marketed in packages of three 5 cc. vials containing, respectively, 250, 500 and 1,000 units per cc: Lamb's Quarters Pollen Extract—Mulford; Ragweed Pollen Extract (Fall)—Mulford; Timothy Pollen Extract (Spring)—Mulford; Wormwood Pollen Extract—Mulford. (*Jour. A. M. A.*, Oct. 30, 1926, p. 1479.)

HARROWER'S ORGANOTHERAPEUTIC INDICATOR.—To advertise its pluriglandular products, the Harrower Laboratory uses a device containing an "indicator" in the form of an arrowhead, the shaft of which is a slot in a disk, superimposed on a larger disk. Around the edge of the larger disk are the names of some seventy diseases or disease conditions. When the arrow is rotated to point to any one of these names, one or two numbers become visible through the slot; these refer to the list of "pluriglandular formulas" on the back of the disk. Each condition has its appropriate (?) formula. The Council on Pharmacy and Chemistry has reported on a number of Harrower gland mixtures, pointing out the lack of evidence for their efficacy when given by mouth and also the irrationality of prescribing mixtures that resemble those of the old fashioned shotgun nostrums. The fact that it is apparently profitable for the Harrower Laboratory, Inc. to send out such advertising as that described, is a sad reflection on those physicians who allow themselves to be influenced by "literature" that is sent out by commercial houses. (*Jour. A. M. A.*, Oct. 16, 1926, p. 1322.)

VACCINE TREATMENT OF COLDS.—It is not definitely known whether or not a cold is the result of a spe-

cific infectious process. The prophylactic as well as the curative value of vaccine therapy in this condition is therefore quite problematic. What we know about the nature of the affliction makes it highly improbable that much good can be accomplished by means of vaccine, and clinical experience seems to substantiate these deductions. (*Jour. A. M. A.*, Oct. 23, 1926, p. 1412.)

THE WIMPUS FRAUD.—For some years, various individuals and concerns have exploited devices alleged to be for the purpose of making it possible in whom the erectile power was lost, to perform the sexual act. One of the most widely advertised products—the "Wimpus"—was exploited by a concern calling itself the Higrade Specialty Co., which seems to have offices in various cities, including New York, St. Louis and Dallas, Texas. The device appears to be made in Dallas, Texas, where the two men who are behind the scheme are said to live. Advertising for the product also goes out under the name "Surgical Splint Corporation." A fraud order has been issued against the Higrade Specialty Co., debarring it from the use of the mails. A device similar to the "Wimpus" is at present exploited under the name "A-Val," put on the market by the A-Val Specialty Co., Chicago. (*Jour. A. M. A.*, Oct. 30, 1926, p. 1497.)

Propaganda for Reform

LAVEX.—Lavex is known to the public best as an alleged cure for "catarrh." It is put on the market by the Lavex Chemical Co., Kansas City. Lavex appears to be a new name for what used to be called "Maignen's Antiseptic Powder," on which the Council on Pharmacy and Chemistry published a report in 1914 and which in 1915 the government declared misbranded because of false and fraudulent claims. Now the Post Office has put a stop to this profitable fraud by debarring from the mails the Lavex Chemical Co. and W. R. Smith, the vice president and secretary. Lavex is put up in the form of a powder, a white tablet and a pink tablet. Other preparations containing practically the same ingredients as those contained in the "Lavex" powder are sold under the names "Lavex Vitamines," "Lavex Pyorrhea Remedy," "Lavex Hayfever and Rose Cold Treatment," "Lavex Cold Remedy," "Lavanio Douche Powder," "Lavex Stomach Tablets," and "Lavex Throat Tablets." The ingredients of the principal preparation, "Lavex" powder, as furnished the Post Office inspector by the promoters are as follows: water-slaked lime 15 parts, sodium carbonate (soda ash) 15 parts, boric acid 3 parts, aluminum sulphate 2 parts, perfume. (*Jour. A. M. A.*, Oct. 9, 1926, p. 1232.)

PHYSICAL THERAPY.—The Council on Physical Therapy of the American Medical Association publishes a report on the present status of physical therapy. The Council cautions that while there are certain definite indications for the use of some one or a combination of several physical agencies in the treatment of disease, it is harmful practice to depend on these agencies alone, to use them in place of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of diagnosis. The Council warns against the indiscriminate use of physical measures and the danger that their use may lead into dishonest practice or quackery. The physical measures that have been found to have certain therapeutic value include: 1. Heat, Natural and Artificial. 2. Hydro-

therapy. 3. Light. 4. Electricity. 5. Massage. 6. Therapeutic Exercises. The Council feels that the following considerations must receive the most careful attention of the medical profession: 1. Physics, physiology and biochemistry must be called on to dispel the empiricism of the past and to prove the value of various physical agencies. 2. Physical therapy must be recognized as a definite part of medicine, practiced and controlled by graduate physicians. 3. Since physical therapy is a definite part of medicine, every medical school should give thorough training in this subject. 4. Persistent, prolonged effort must be made to eradicate the abuses of physical therapy. The Council proposes to point out to the medical profession the advantages and the disadvantages of physical therapy so that its abuses may be reduced to a minimum, and its scientific possibilities may be appreciated. (*Jour. A. M. A.*, Oct. 16, 1926, p. 1302.)

Toxivi and Toxok Not Acceptable For N. N. R.—The Council on Pharmacy and Chemistry reports that according to the Cutter Laboratory, Berkeley, Cal., Toxivi is stated to be an extract of *Rhus toxicodendron* for use in the prophylactic and therapeutic treatment of dermatitis caused by poison ivy. Similarly, Toxok is claimed to be an extract of *Rhus diversiloba* for use in prophylactic and therapeutic treatment of dermatitis caused by poison oak. The Council found Toxivi and Toxok unacceptable for New and Nonofficial Remedies, because the statement of their composition and strength is indefinite; because the claims advanced for them are not warranted, and because they are unoriginal preparations marketed under proprietary nondescriptive names. (*Jour. A. M. A.*, Oct. 16, 1926, p. 1321.)

Firma Chloro Not Acceptable For New and Non-Official Remedies.—The Council on Pharmacy and Chemistry reports that, according to the advertising of the Chloro Chemical Corp., Bloomfield, N. J.: "Firma Chloro is made by mixing the following: Chloride of Lime, Potassium chlorate, Tincture of Iodine; Picric Acid, Bicarbonate of Soda and Water." A report of a firm of chemists employed by the Chloro Chemical Corporation states that the sample was "essentially a solution in glycerine, of sodium and calcium hypochlorite, calcium carbonate and hydroxide, calcium chloride, calcium iodide, potassium chlorate and salt of picric acid." While tincture of iodine is used in the preparation of the mixture, the product as marketed is admitted not to contain free iodine. In the advertising the product is said to contain 0.04 per cent of available chlorine, and the claims for its efficacy seem to be based on this very small percentage of potent chlorine. Firma Chloro was found inadmissible to New and Nonofficial Remedies because it is a needlessly complex mixture marketed under a noninforming name. (*Jour. A. M. A.*, Oct. 16, 1926, p. 1321.)

SKIN TEST IN MEASLES

Another attempt has been made by Ruth Tunnicliff and Ruth E. Taylor, Chicago (*Journal A. M. A.*, Sept. 11, 1926), to produce an extracellular toxin with the strain of measles diplococcus whose intracellular toxin produced the specific skin reactions in previous experiments. Filtrates of cultures grown six or seven days in 1 per cent. sheep blood, 0.2 per cent. dextrose broth, gave a definite reaction in a dilution of 1:10. One-tenth cubic centimeter of the toxin was injected intradermally and the test read after eight hours and again after twenty-one hours. The reaction consisted of a circumscribed area of erythema and about 1 cm. in diameter. There was

no reaction with the toxin boiled one hour and used as a control, except occasionally. The tests in individuals showing these pseudoreactions were not included. Of twenty persons who gave a history of not having had measles, ten gave positive reactions. One of these positive tests was in an infant 4 months old. Two of the children with positive skin tests showed no reaction on later receiving two more skin tests. A nurse with a negative history of measles and with a history of repeated exposure gave a negative skin test. None of the twelve persons with a history of measles gave positive skin reactions. The tests, with the exception noted, were given to persons over 1 year old. The extracellular toxin was neutralized by convalescent human measles serum and by the serum of a goat immunized with green-producing measles diplococci, but not by normal goat serum. These experiments indicate that antigens of killed measles diplococci (intracellular toxin) would be more effective for susceptibility tests than extracellular toxins on account of the former giving positive skin tests in about twice as many persons susceptible to measles as intracellular toxins (filtrates).

SURGICAL TREATMENT OF PULMONARY SUPPURATION IN CHILDREN

Evarts A. Graham, St. Louis (*Journal A. M. A.*, Sept. 11, 1926), says that there is no particular treatment of pulmonary suppuration that will be equally satisfactory in all cases. It is unwise at present to attempt to standardize the treatment of these conditions. On the contrary, each case must be judged by itself, and the best results will be obtained if such cases are studied by a team consisting of a medical man experienced in this kind of work, a surgeon with equal experience, and a skilled bronchoscopist. The method of treatment selected for a case of acute pulmonary abscess will depend largely on its location. In children, the frequency of the aspiration of foreign bodies into the lung makes it imperative to search carefully in every case for such a possibility. For the location of the suppuration and the determination of cavities, ordinary physical and roentgen-ray examinations are often unsatisfactory. Lesions concealed behind the shadows of the heart and fluid levels in small cavities will often be made to appear in a striking manner if the patient is examined in a number of positions. The bronchoscope, in the hands of an expert, will often reveal this information positively, and the newer method of using lipiodol, as proposed by Sicard and Forestier, will undoubtedly prove of enormous value. The aspirating needle should not be used in cases of suspected pulmonary suppuration because of the danger of creating an empyema from leakage of pus along the needle track. Of forty cases of pulmonary suppuration in children under 12 years of age, thirty-three patients, or 82.5 per cent., are free from cough and other symptoms. The mortality has been 12.5 per cent.

ETIOLOGY AND DIAGNOSIS OF INTRA-UTERINE FETAL DEATH

William H. Browne and Harvey L. Kincaid, Iowa City (*Journal A. M. A.*, Sept. 11, 1926), report a case of intra-uterine fetal death, apparently the result of a hematogenous streptococcal infection. It was thought valuable to determine whether the streptococcus recovered from the fetus would produce intra-uterine fetal death when injected into pregnant animals. Confirmatory evidence was obtained that the cause of intra-uterine fetal death was probably the streptococcus found in the fetus.

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ORIGINAL ARTICLES

HEADACHE FROM THE GYNECOLOGICAL STANDPOINT*

H. S. CROSSEN, M.D.
ST. LOUIS

What relation is there between pelvic diseases and headaches? The influence of uterine and ovarian diseases in causing headaches and other nervous disturbances has been a subject of interest and speculation from time immemorial. When I began medical work, some thirty years ago, this subject was all very simple. The problem had apparently been solved. Certain forms of headaches and other extragenital disturbances were just "reflexes" from the pelvic organs. That is, certain diseases of the genital organs set up impulses that traveled by way of the nerves to distant parts of the body, appearing there as pain or other abnormal sensation. Headache of a certain type was supposed to indicate uterine disease, and another type ovarian disease.

As advances were made in the study of normal and abnormal processes, serious doubt was thrown on this convenient theory of reflexes. As the various causes of headaches were carefully worked out, it became apparent that those attributed to uterine and ovarian disease were really due to other conditions. Also, it was found that those general nervous disturbances which seemed so clearly reflex from disease or destruction of the ovaries, could be controlled by a functioning ovary when all nervous connections had been served. That is, the demonstrable influence of the ovary on the general system was exercised not through the nerves but through some substance secreted into the blood stream. It was with great reluctance that this general theory of nervous reflexes from the pelvic organs to distant parts was given up, but finally it had to be abandoned. Long after physicians had found that this engagingly simple explanation did not explain,

the theory was still strong in the minds of patients. They were quite certain that uterine and ovarian diseases were indicated by particular kinds of headache and other distant disturbances. And this idea has persisted more or less to the present time. I remember only two or three years ago a patient came seeking diagnosis as to pelvic conditions but objected to pelvic examination. She described in detail her headache and other pains, and seemed quite astonished that I could not make the diagnosis at once. I had considerable difficulty convincing the patient that I could not tell whether or not she had womb trouble simply by looking her in the eye, so to speak.

The convenient theory of direct reflexes to account for all the apparent effects of the pelvic organs on distant parts having been abandoned, then came the question, "what influence has pelvic disease on distant disturbances?" That is a very important and practical question, one that enters daily into the treatment of patients. The patients have complaints, headaches and other pains, that demand relief. Correct appreciation of the cause is likely to bring about effective treatment, while misinterpretation as to cause is likely to result in ineffective or even harmful treatment. In proof of the seriousness of this subject, I need only to refer to the many mutilating operations carried out in former years to relieve disturbances which we know now were not due to the organs removed. Having to meet and solve this problem as far as my own practice was concerned, I long ago reached the conclusion that there was no special connection between the pelvic organs and headaches or other distant nervous disturbances. Some years ago when asked to address the New York State Medical Society, I chose this troublesome feature of pelvic diseases as the subject of my paper. The title having been sent in, papers on allied subjects were grouped with it, neurologists were invited and we had a most interesting discussion. My conclusions then expressed had been my working rules for some years past, and they still express the convictions that guide me in the handling of these patients. I quote from that part of the paper

*Remarks in a Symposium on Headache; arranged by the Ophthalmic Section of the St. Louis Medical Society, Oct. 15, 1926.

dealing with extrapelvic symptoms supposed to be dependent, in whole or in part, on some intrapelvic lesion:

"The decision as to what extent a pelvic lesion may be held responsible for extrapelvic symptoms present in a given case, will depend to a considerable extent on the physician's views in regard to reflex symptoms in general and 'pelvic reflexes' in particular. My view of the matter, and the rule that guides me as to the choice of operative treatment in these cases, is as follows: 'The removal of the pelvic lesion will relieve the distant nervous disturbances only insofar as that nervous disturbance is due to malnutrition or to general irritation of the nervous system dependent on the local lesion. That is, I am not ready to admit any specific influence by way of the nerves of a pelvic lesion over a like lesion in any other of the deep seated organs. Investigations have shown that many of the organs of the body give into the blood specific substances having definite general and local effects, and the ovary belongs to this group. But this product is physiological and not due to a lesion. Furthermore, it is carried by the blood and not by way of the nerves.'"

Holding then that headache is not caused by direct nervous impulses from diseased pelvic organs, we may turn from the negative to the positive phase of the subject and inquire, "What influence, if any, has pelvic disease in causing headaches?" Pelvic disease may cause headaches in several ways:

1. Through blood loss, with its resulting anemia, malnutrition, lowered resistance and increased irritability of all the nerves.
2. Through septic absorption from an inflammatory focus, with like results.
3. Through peritoneal irritation with consequent malnutrition from vomiting and other digestive disturbance.
4. Through pain so persistent or recurring as to put the whole nervous system in an irritable, hypersensitive condition.
5. Through worry. Worry about some serious pelvic lesion, or even about a minor lesion, may keep the whole nervous system on edge, with consequent headache and other pain phenomena.

When asked how far the removal of a pelvic lesion will benefit a patient's headache or other distant pain, I reply, "As far as that removal will improve nutrition or allay general irritation." I feel that is as far as we can safely go in these cases at present. It is a fact that in some cases the results from operation apparently go beyond this, and we may hope for these added results. But these added results are erratic, unreliable, obtained only occasionally, and we cannot justly hold them out as an

indication for operation. So much for my working rule.

In asserting, for the present, that headaches and other distant pains are not caused by direct nervous impulses from pelvic disease, I am well aware that there are unexplained phenomena in this field. This is a complex subject and the more we learn about it the more we see that is still to be learned. Much is unknown in regard to the autonomic nervous system, which is so intimately concerned in reflexes and referred pains from visceral disease. In the future study of the intricacies of the sympathetic and parasympathetic systems there may develop clear evidence of nerve paths through which uterine and ovarian disease may cause headaches, but so far no such evidence has come to my notice. Possibly our neurological friends have such evidence already. If so, I trust it will be presented, for I am seeking information on this interesting and important subject.

University Club Bldg., St. Louis.

DIVERTICULUM OF THE DUODENUM

KERWIN W. KINARD, M.D.

AND

DWIGHT T. VANDEL, M.D.

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Morgagni¹ has been acknowledged to have first described in 1761 the pathological condition known as diverticulum of the duodenum. This condition has been found more frequently at postmortem examination than at operation. Since Case² first described the roentgenologic findings of diverticulum of the duodenum, more surgeons have been mindful of the possibility of such a condition existing in any patient who suffers from upper abdominal disease. While diverticulum of the duodenum is considered a moderately rare lesion, it is quite probable that it would be found oftener if all cadavers were thoroughly autopsied. Again, if the duodenum and its fossae were as carefully examined at operation as are the gallbladder, pylorus, pancreas, liver and appendix, this type of pouch or pocket extending from the main cavity might be found oftener.

Perry and Shaw³ in 1893 characterized certain distension and traction pouches of the duodenum as diverticula. Of such cases they reported 14 pressure and 3 traction diverticula. Le Tulle⁴ reported the finding of such pouches in the duodenum near the region of the pylorus.

Baldwin⁵ in 1911 reported that up to that time he was able to find 67 cases of such diverticula; he later reported 15 additional cases

which were found during the course of 105 autopsies.

Linsmayer⁶ reported 45 cases found in 1367 autopsies. Cole and Roberts⁷ reported 30 cases of which 23 were pouches located in the second portion of the duodenum; three were in the third portion of the duodenum and one case was developed in the fourth part.

Recently Spriggs and Marxer⁸ reported having found 38 diverticula of the duodenum in 1000 cases that came to them for gastro-intestinal examination, giving an incidence of 3.8 per cent. for this condition which is believed to be found much less frequently.

Considering the development of the duodenum and organs such as the liver, pancreas and common bile duct, which originate as buds

hepatic ducts develop from one bud as the duodenum, and that the common duct, cystic and gallbladder develop from another pouch, and that the hepatic duct joins the cystic duct and common duct, one wonders how it is possible not to have more serious abnormalities. Then, to make it more complex, a third duct, the duct of Wirsung from a third bud, joins with the common duct near its entrance into the wall of the duodenum. Therefore we can understand how easily we might have a diverticulum of the duodenum at birth.

On the other hand, any break in the wall of the duodenal musculature from trauma, disease or over-distension, which would cause a permanent weakness, might readily develop a diverticulum. This sort of pouch one could more readily conceive as being practical in the large bowel than in the duodenum.

EMBRYOLOGY

Casually visualizing the development of the duodenum we find, according to Gray⁹ and others, that the primitive alimentary canal is formed early by the closure of a part of the blastoderm and from this is developed the foregut, the midgut and the hindgut. The foregut lies within the cephalic flexure and behind the heart. The midgut into the vitello-intestinal duct or yolk sac. The hindgut lies within the caudal flexure.

We are concerned with the foregut, from the upper part of which arise the mouth, tongue, pharynx and bronchial arches; the remaining portion becomes tubular and elongates to form the esophagus, stomach, the larger part of the duodenum and the organs that have grown out from these structures.

The alimentary canal at this time is nearly a straight tube in front of the notochord and primitive aorta. The primitive stomach is just posterior to the pleuroperitoneal cavity. Hence their development occurs concomitantly.

The duodenum is developed from that portion of the primitive alimentary tube just below the stomach. A bud appears on its anterior surface and forms the liver close to the diaphragm. As the liver develops it pushes the peritoneum ahead of it and downward and leaves only a pedicle of peritoneum at its duodenal origin. It develops the hepatic ducts.

The duodenum by this time has developed from the two folds of peritoneum adjacent to it—its mesentery—and thereby is fastened to the posterior abdominal wall continuing above with the mesentery of the stomach and below with that of the pylorus.

The pancreas grows into these layers of duodenal mesentery, extending backward similarly as the liver extends forward. The pan-



Fig. 1. Showing diverticulum in second portion of duodenum. Diverticulum remained filled. Barium for 72 hours.

or pouches from the duodenum, some interesting thoughts come into our mind. If, for example, instead of each solitary pouch which forms the liver, bile duct, and pancreas, there should be more than one such bud or pouch developed, the question of what they might develop into is a great one. We might have supernumerary organs or ducts or we might have only anatomical abnormalities of these organs. We realize that all growth begins after certain stimuli have occurred, and that development is on time schedule. Therefore if one part develops too rapidly, or another part is tardy in its development, we must have abnormality. Considering that the liver and

creas is well established in the second month as a hollow projection of hypoblast from the dorsal wall of the duodenum. Its duct, the duct of Wirsung, joins with the common bile duct and opens ultimately into the duodenum. As it grows the liver becomes shifted away from the duodenum. A small diverticulum forms as a protrusion through the duodenal wall and becomes the common bile duct. From this common bile duct a small diverticulum arises from which develop the cystic duct and gallbladder. Later the hepatic duct unites with the cystic duct and they grow into the common bile duct.

Thus the lower part of the duodenum is carried to the left and the initial part of the large intestine is carried across it. This explains how the duodenum lies behind the transverse colon in the adult, while the passage of the superior mesenteric artery occurs in front of it.

About the same time the stomach rotates and its left side becomes anterior, while its right side becomes posterior. Thus the liver passes to the right hypochondriac region while the pancreas passes posteriorly and slightly to the left.

The pyloric end of the stomach ascends and the greater curvature becomes the inferior border, while the lesser curvature becomes the superior border of the stomach.

Deaver and Ashurst¹⁰ say that the stomach has an anterior and a posterior wall covered by peritoneum, but while the anterior is in free communication with the general cavity of the peritoneum, the posterior wall has become more or less isolated and is in relation with the pancreas, the lesser peritoneal cavity separating them. This lesser peritoneal cavity retains its only connection with the general peritoneal cavity at its right through the foramen of Winslow. The duodenum and pancreas become fixed and are held, due to this rotation, behind the stomach and transverse colon. Because they are subject to no movement of consequence, the posterior mesenteries absorb, and they are eventually retroperitoneal organs.

Two serous surfaces, approximated but not functionally active, fuse. Thus the duodenum and its mesentery, in which the pancreas develops, are pressed by the transverse colon against the posterior abdominal wall and unite extensively with the peritoneum covering the latter.

The transverse colon, being carried transversely across the duodenum, has its mesenteric attachment there and to the postabdominal wall.

DIVERTICULUM

A diverticulum is a pouch or pocket leading off from the main cavity or tube. Such pouches are frequently found to exist during or after

human development, as the canal of Nuck and Meckel's diverticulum. In fact all forms of diverticulum are probably abnormal. When present they invariably cause trouble sooner or later. These types of congenital diverticula constitute a distinct class that are so called true diverticula and have anatomically all the tissue layers of the organ from which they were derived. They are subject to all the pathological variations from congestion to fibrosis and malignancy. Diverticulitis is a very common affliction in persons having a diverticulum.



Fig. 2. Showing second portion duodenum following operation (1 month). No out-pouching present and no retention.

Anatomically the diverticula may be classified as follows:

A. Congenital. Present from birth and in many cases giving no symptoms. These diverticula arise from localized out-pouchings of the whole duodenal wall during its embryological formation, and they represent abortive attempts in the formation of supernumerary pancreas.

B. Acquired. These develop after birth and are usually due to some extrinsic factor. Of this form we have, (a) true, which contain all the coats of the bowel; and (b) false, consisting of mucosa, submucosa and serosa, being devoid of muscularis.

The presence of a serous or peritoneal coat depends on whether the diverticulum is on the free surface or mesenteric border of the gut, extending between the two layers of the mesentery.

In the formation of acquired diverticula the extrinsic factor may be mainly traction, such as results from adhesions to the duodenum from gallbladder disease or atrophic pancreatitis, ulcer or other upper abdominal inflammatory

lesions. Such adhesions by their pulling force cause an out-poching of the duodenal wall, which is the point for potential diverticulum formation.

Among the intrinsic conditions causing diverticulum, one may consider localized points of weakness in the muscle wall, such as the atony of senility with diastasis of the gut muscles combined with an increase of intra-intestinal pressure, usually from gas, permitting a herniation of the mucosa and submucosa. In addition there may be points of weakness in the duodenal wall at the point of entrance of the ampulla of Vater or mesenteric vessels and pressure from partial obstruction below the diverticulum.

The relationship of blood vessels to diverticula formation has been confirmed by Hauseman¹¹ and Edel¹² and they consider pulsion diverticula of the false variety as mucosal herniations in relation to the mesenteric veins in conjunction with a predisposing muscular weakness. These writers experimentally produced diverticula in cadavers by filling the intestines with water, which ruptured into the mesentery. In experimentation with living animals Chlumsky¹³ found that rupture occurred opposite to the mesentery; however in ten or more hours after death the intestine ruptured into the mesentery. According to Beer¹⁴ there are no weak foci at the mesentery and Chlumsky's results are confirmed in clinical findings of ileus, in which the circular muscle and serosa first tear opposite to the mesentery. Since diverticula exist mostly in old people, Beer¹⁴ and Telling¹⁵ consider that a change has occurred in the intestinal wall, since the intestine of the aged is more or less atonic.

In many of the false diverticula with chronic inflammatory changes due to inability of the pouch to become emptied of its intestinal contents, the mucosa has relatively few glands, the submucosa is thickened and the muscularis forms a sphincter like valve at the mouth of the diverticula.

In cases cited by Buschi¹⁶ 80 per cent. of duodenal diverticula occur in people past 50 years of age, the majority being in males.

On gross examination the diverticula are usually free from pathology; however in some cases there has been marked mucosal inflammation and in others carcinoma and ulceration have been found in the base of the diverticulum.^{11 18 19}

The symptoms of duodenal diverticulum may simulate more often a peptic ulcer or diaphragmatic hernia; however on roentgenologic examination the suspicion of a diverticulum is usually confirmed, this being the visualization of a localized paraduodenal sacculation which

remains distended after the duodenal contents have passed. If symptomless the diverticula will probably be left alone; however if it is productive of distress, surgical measures may be instituted.

CASE REPORT

Dr. E. T. M., male, age 68 years. Was perfectly well for many years. About 15 years ago began to have some occasional abdominal distress; about eight years ago the condition became worse and since 1918 patient complained of severe abdominal distress which occurred shortly after having eaten a meal. The pain was in the epigastrium and radiated straight through to the back. Following this there was marked distension and nausea. Tenderness then began and was present throughout the day.

After several months of this sort of life the patient began to lose weight and strength and could eat only liquids. Even these caused pain. Patient would have a ravenous appetite and go to the table extremely hungry only to become nauseated with the taking of food. Some relief was obtained by soda bicarbonate and pressure over epigastrium while in a recumbent position. The condition continued to the time of operation, gradually becoming worse until food could not be taken.

At examination the entire body showed emaciation as seen in starvation cases. The musculature was prominent and practically no panniculus adiposus was present.

Tenderness was present over the pyloric region and over the ileocecal area. A diagnosis of chronic appendicitis with pylorospasm was made with possible duodenal ulcer.

Roentgenological findings revealed a diverticulum of the second portion of the duodenum with a retention of barium for 48 hours.

Operation proved the roentgenologic reports to have been correct. The appendix was obliterated and merely removed from the cecum by double silk ligature and was not removed from the abdomen, but remained fixed in its adhesions.

The diverticulum was about 5 cm. in diameter with thickened and hyperemic serosa. All structures of the duodenum were present, this placing it in the group of true diverticuli. The pouch was excised and stump turned in by a two layer Connell over and over suture through muscle and peritoneum.

The patient was discharged from the hospital on the 12th postoperative day in good condition. Following operation he gained 80 pounds and has enjoyed good health and appetite up to August 12, 1926, when he was last seen.

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ACUTE APPENDICITIS*

A STUDY OF SIX HUNDRED CONSECUTIVE CASES

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That the mortality rate in acute appendicitis is on the increase is definitely shown by our vital statistics. That this is one of the most common, most easily diagnosed surgical diseases and one in which the treatment is universally accepted as surgical, does not argue too well for the profession. That this should be the case with our present refinement of technique, well equipped and easily accessible hospitals, seems even less encouraging. Are we not possibly neglecting the common in our zeal for the new and the unusual?

A nationally prominent surgeon, in discussing this subject some time ago, rather laid the blame upon the younger generation of surgeons and medical men, saying that inasmuch as the younger men had not had the benefit of years of debate and final general conclusions, they have not been sufficiently impressed and do not carry out the basic principles of diagnosis and treatment as carefully as the older men. I wish to say in defense of the younger generation that we have been taught that there is no medical treatment for appendicitis and that no purge is to be given in any acute abdominal condition. In our experience, it is the older general practitioner who continues to give calomel and salts and brings the case to the hospital "well cleaned out and ready for operation." However, we cannot lay the entire blame upon the general practitioner, young or old; the surgeon or "operator" must come in for his share. Realizing this, we have studied our cases for the past six years in the hope of discovering our errors and profiting by them in the future. I am not going into long and meaningless statistics and percentages but shall

merely try and give a few of the most outstanding points.

There were six hundred consecutive cases, all bona fide acute cases, proved by temperature, leucocyte counts (if they prove anything) and by the appearance of the appendix. The ages of the patients ranged from eighteen months to seventy eight years. It was most common in youth and early adult life. There were three hundred ninety eight cases in which the infection was confined to the appendix and two hundred two in which the appendix had perforated previous to operation, with a more or less generalized peritonitis. There were thirteen deaths in the entire six hundred cases, a mortality of 2.1 per cent. Of the three hundred ninety eight clean cases there were two deaths, a mortality of .5 per cent., one from pneumonia and the other, a man of fifty seven years, died very suddenly on the seventh day following operation while sitting up in a chair, probably from a coronary artery disease, although a post could not be obtained to confirm the diagnosis. In the two hundred two perforated cases, there were eleven deaths, a mortality of 5 per cent. Eight died of general peritonitis, one of a paralytic ileus, one from septicemia. Six cases developed obstruction and were operated. All of these recovered. One case developed a subdiaphragmatic abscess; this was drained and he recovered. One case developed a secondary abscess in the pelvis, which was drained with recovery.

Of the perforated cases, 42 per cent. gave a history of purgation and 5 per cent. of enemas. *Every case that died had been purged before coming to the hospital.*

All cases were operated immediately on admission to the hospital. The McBurney incision was used in the majority of cases, the only exception being cases in which it was desired to inspect some other organ.

In perforated cases we invariably use the McBurney incision, enlarging it up or down as the case demands, cutting directly across the fibers of the internal oblique and transversalis and making the incision large enough to work easily and without spreading the infection to clean peritoneum. Before any adhesions are broken up the general peritoneal cavity is carefully and well packed off with gauze sponges, to avoid spreading infection to clean peritoneum, the adhesions carefully separated, avoiding all pulling and "digging," and all free pus is mopped out as it is encountered. The mesoappendix is clamped as far away from the appendix as possible and with as little manipulating as possible, to avoid loosening a piece of thrombus from the appendical vessels into the general circulation. The appendix itself is re-

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moved with the utmost care and gentleness to avoid expelling from it more infectious material, always avoiding tearing and pulling and removal in pieces. Drainage here differs none from drainage of any infected wound, the freer the drainage the more prompt and certain the recovery. When there is any considerable amount of peritonitis a rubber tube is placed in the pelvis for it almost always contains pus. The abscess cavity is packed with gauze, using as many pieces as are needed to fill the cavity; then, and not until then are the gauze pads used to wall off the general peritoneal cavity removed. The wound is left wide open, being only gently brought together with two or three through and through sutures of silkworm gut tied over a piece of gauze. In the occasional case, where the appendix is inaccessible and its removal seems likely to spread the infection and cause a general peritonitis, the appendix is not removed and the wound is simply drained.

POST OPERATIVE TREATMENT

The patient is given one thousand cc. salt solution under the skin. Head of bed elevated. Morphine given often enough to keep respiration down to ten to twelve per minute and nothing by mouth until peristalsis is resumed. Salt solution repeated as indicated. No enemas given before fourth day and no cathartics for a week or more, a rectal tube being used to relieve gas pain. The outside dressing changed *pro re nata*. On the fourth or fifth day the gauze packs are removed and the wound then Dakinized. As soon as it becomes clean, usually in a very few days, it is closed, either by through and through sutures of silver wire, or brought together with adhesive straps.

The anesthetic used in the majority of cases was ether. In the very sick case local or local and gas were used.

CONCLUSIONS

We cannot see that age makes any difference except that in childhood the symptoms are a little less definite, the disease seems to progress more rapidly and there seems to be less resistance to infection and less tendency to localized walled off abscess. The mortality rate was practically the same in children and adults.

It is our opinion that the most outstanding causes for the high mortality in acute appendicitis are:

(1) Purgation. When we can teach the profession and laity that little rhyme from John B. Deaver's operating room:

Purgation means perforation,
In an appendix kinked and bad.
Food and drink annoy him,
And aperients drive him mad

we will have done much to reduce the mortality of this disease.

(2) We believe that acute appendicitis is an emergency and that operation should be insisted upon and should be done as soon as possible after the diagnosis has been made; for who can tell in which case the appendix will perforate in the next twelve to twenty four hours, or which one will subside.

As to the Ochner treatment of waiting for localization, we can see no advantage except convenience to the surgeon. These cases can be opened up and drained with a local, spinal, or gas anesthesia, in bed in their room if necessary, and by careful manipulation drainage instituted without the slightest spreading of infection or shock to the patient.

(3) Appendectomy is too often looked upon as a simple operation and is often attempted by the general practitioner and occasional surgeon who would not think of attempting a hysterectomy, prostatectomy, Halstead, etc. Admitted, very often it is a very simple and easy procedure, but again, it may be as difficult as any operation in surgery to perform correctly, and with safety to the patient, and should only be attempted by a competent and well trained surgeon.

(4) Too often the perforated case is insufficiently drained and a walled off or fairly well localized abscess is entered and the infection spread by careless handling to clean and uninfected peritoneum by the "terrier dog" methods of operating, changing a local peritonitis into a general one with fatal termination.

These, we believe, are the chief reasons for the continued high mortality in acute appendicitis, and probably each of us, young and old, medical man and surgeon, is in part responsible.

THE IMPORTANCE OF A GYNECOLOGICAL EXAMINATION*

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It is an established fact that whatever type of work you are doing when dealing with diseases in women, it is necessary that you have some knowledge of what is going on in the female pelvis. In medicine of today you cannot fully establish an accurate diagnosis until you know what is in the pelvis, as there are so many disorders that have a bearing there. Whether your work be nose and throat practice, surgery and its allied subdivisions, medicine, neurology,

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you cannot obtain the best results until you know the pelvis is giving no trouble. In my years of teaching physicians who have applied for postgraduate work I have been amazed at how little knowledge of the pelvis the average physician possesses. When asking them just what they want me to show them they invariably answer by saying, show me all you can about how to examine a pelvis and how to determine whether or not the contents are diseased.

Some have been in practice for over thirty years and tell me they have never been able to palpate the normal uterus and adnexa and that if there be some pathology present they would be unable to locate it. They treat their patients symptomatically and make no attempt at examination. This is pathetic, when you think about it, and you cannot help but wonder where the trouble lies. Is it the fault of the practicing physician—and when I speak of physician I mean all, including the specialist, regardless of the field he is interested in; or is it the fault of our teaching at the universities. It is true that pelvic diagnosis is difficult, but if one will apply himself he can soon become efficient and rule out many conditions. Unfortunately, no satisfactory laboratory diagnosis, such as the X-ray, has been found to be of any avail in pelvic diagnosis. One has to rely on his clinical diagnosis and good judgment from what he feels, which requires constant application.

When I see some physicians examine a pelvis and observe the awkward manner in which many go about it I do not wonder at their ignorance of the female pelvis. Most of them pay no attention to the finer points of an examination in order that their fingers might appreciate the best feeling. They stand far to the side of the patient and reach over one leg to introduce the examining fingers under the greatest difficulty.

In order to feel a pelvis accurately and arrive at a diagnosis many things must be considered. You must gain the confidence of the patient and never force a pelvic examination upon any one. She must be placed flat on her back with thighs slightly flexed on the abdomen in order to get the best relaxation of the abdominal muscles; the bladder and rectum must be emptied and the patient's mind diverted from the examination. The examiner should stand directly in front of the pelvis, rather close up, and when the examining fingers are introduced into the vaginal tract great care must be taken not to cause pain. The forearm and hand should be flaccid and free, the elbow resting either on the ilium or the thigh of the examiner; this is done so that the strain is taken off the nerve supply of the examining fingers and allow your touch to be very acute; this is just

as important as for a typist to seat herself directly in front of her machine in order that her fingers will strike the keys properly. The freedom of motion of the forearm and fingers is very important. The old saying that one's fingers are too short to make a thorough pelvic examination is obsolete. I do not care how short one's fingers are if he will place himself properly before the patient he can feel all there is to be felt. When you wish to introduce your fingers high in the vaginal tract, have your elbow resting against your pelvis, then lean forward with your body and in an even fashion the ring and small fingers, which are normally flexed in the palm of the hand, will indent the perineum, which is very elastic, to a considerable degree and make palpation easy. In a systematic way the contents of the pelvis should be palpated and a mental picture made.

Just because one is a specialist he must not become narrow but, I might say, that is what usually happens. He thinks every ailment the patient has is directly referred to his particular specialty. One must try to look at conditions from a broad angle and make the diagnosis after all the evidence has been weighed and the facts brought to a minimum. In making such an examination the pelvis is one part of the anatomy usually overlooked. A very careful examination of the head, chest, abdomen, extremities, with all the available laboratory methods, is usually performed but the real diagnosis may not be reached because the pathology is in the pelvis. How often, because a patient has arthritis, hypertension, etc., does the nose and throat man take out the tonsils and adenoids, remove a piece of bone from the nose, drain the antrum, or the dentist extract all the teeth, when in reality the patient has an old pelvic inflammation and on a careful examination we find pus in Skene's glands, or the cervix chronically inflamed with microorganisms or pus in the fallopian tubes. Just a few weeks ago I examined a patient for an internist because she had a chronic arthritis and had had several operations. The tonsils and adenoids had been removed, the teeth extracted, an antrum operated, the gallbladder and appendix removed and when I massaged the urethra pus was expressed from Skene's glands which showed intracellular diplococci; when vaccine therapy was instituted recovery was rapid. I could cite other instances of just such happenings.

Take pain in the right abdomen of a woman. It might be from one of several things,—enlarged gallbladder, movable kidney, cyst of pole of kidney, stone in ureter or kidney, kink of ureter with obstruction giving a hydronephrosis with pyelitis, appendicitis, enlarged stagnant cecum, uterine or adnexal mass. Such a classi-

fication involves the internist, the surgeon, the urologist and the gynecologist; for any one of them to jump at a conclusion would be a mistake. A very careful diagnosis should be made both clinically and by laboratory methods and all points of interest thoroughly investigated. Such a case came under my care at the clinic several months ago. A woman thirty years of age had her appendix removed; two months later she had her gallbladder removed; one year later she had a complete hysterectomy with the removal of both tubes and ovaries; then she was a physical wreck. Six months later she applied to the social service for help because she was advised to have another operation for post-operative adhesions and she was brought into the clinic for a pelvic examination. To my surprise a large ureteral stone the size of an almond was palpable about 3 cm. from the ureteral orifice of the bladder on the right side. The stone was so large and so accessible through the vagina that the patient was admitted to Barnes Hospital and the stone removed per vagina. She left the hospital free of her pain in the right abdomen but a neurological patient for life.

Gastro-intestinal patients complaining of gastro-intestinal disturbance are often treated for indigestion. Gastro-intestinal X-ray examinations including tetraiodide examinations for gallbladder disease are often found to be negative when a pelvic examination will find a fixed retrodisplacement of the uterus with or without chronic pelvic inflammation, or new growth from either uterus or adnexa. The gastro-intestinal symptoms are secondary to the pelvic pathology and will readily subside when the pelvis is restored to normal. Recently I treated a patient who had been under the treatment of a leading internist; she had been most thoroughly gone over both by his department and by another famous diagnostic clinic in this country and was under constant treatment, after having a complete work up except the pelvis, and she advised me that at neither of the diagnostic clinics did she get a pelvic examination. She was treated for gastro-intestinal disturbance with endocrine therapy and was taking treatments weekly when she began to have bleeding from the vaginal tract. When I gave her a pelvic examination I found a well developed carcinoma of cervix extending well out to the pelvic wall on all sides. I gave her radium and X-ray therapy and she is much improved in health and many of her symptoms have disappeared.

Many neurological patients can be cured if one has a knowledge of the pelvis. There is no question that in some cases retrodisplacement of the uterus or relaxed pelvic floors cause

great nervous disturbance and that the patient can be greatly benefited by restoring her pelvis to normal. I have seen cases of epileptiform seizures (not true epilepsy) occurring at the menstrual period, and on pelvic examination I have found the cervix tightly closed or the uterus in retrodisplacement and not infrequently have found a clitoris where the prepuce was firmly adherent. When these conditions were restored to normal the symptoms subsided. In the pediatrics service I have seen young girls with mild chorea where freeing the adherent clitoris sometimes effected a cure.

Backache in women, a very common condition and treated variously, such as for flat feet, curvature of spine, sacro-iliac strain, is very often the result of pelvic pathology; retrodisplacement of the uterus heads the list and if such is found conservative treatment, by inserting a properly fitting vaginal pessary, will relieve the complaint.

The most abused operation in surgery is the removal of the appendix, and often done because of being unfamiliar with the pelvis. A woman with pain low down in the right abdomen, rigidity of abdominal muscles, some nausea with or without vomiting, temperature elevated slightly, an increase in leucocytes, and having previously ruled out the urinary tract, a diagnosis is not easy, for you have to consider, appendicitis, salpingitis, ovarian cyst. A thorough pelvic examination almost always decides. If on very careful palpation you get an adnexal mass, some cellulitis or an ovarian cyst, you can usually exclude the appendix; or if it is involved you can consider it secondary. One might say, what is the use of an accurate diagnosis; you have an acute abdomen and the treatment is operative. I do not believe this to be good teaching; first, the satisfaction of an accurate diagnosis is important; second, it is not good surgery to remove an acute salpingitis as the condition usually quiets down under conservative treatment and gives no further trouble. If the condition is one of acute appendicitis, or ovarian cyst, there is no question that the condition is operative.

In the past six months I have seen three cases in young girls ranging from nine to sixteen years in age that were opened up for an acute appendicitis and the condition was found to be a small graafian follicle ovarian cyst with twisted pedicle on the right side. The appendix in each case was found to be normal. There is no doubt that an accurate diagnosis in all these cases was difficult, as all the symptoms pointed to an acute appendicitis, but in none of them was a pelvic examination made.

I could go on indefinitely and discuss the importance of a pelvic examination of women

having complaints referred to regions other than the pelvis, as not all pelvic conditions cause symptoms referable to the pelvis, but rather urge that regardless of what specialty you are interested in or if your work is of a general character there is much information to be gained by giving your female patients a very thorough pelvic examination.

I have mentioned these few instances with the idea of showing how easy it is to overlook some serious condition by not making a thorough pelvic examination.

Wall Bldg.

INTRAMUSCULAR ETHER INJECTIONS IN COMPLICATED PERTUSSIS

CALDWELL B. SUMMERS, M.D.

KANSAS CITY, MO.

My attention was first drawn to this method of treating pertussis in 1924 in an article by Dorgatz.¹ At that time I had an infant critically ill with broncho-pneumonia and pertussis. Intramuscular ether injections were tried with surprising results.

There have been several articles on this method of treatment. Adrian was the first to use ether intramuscularly in pertussis in 1914. Later articles appeared by Harrison, Weit, Renard, Danfour, Dolche, Variot and G. Genoese. The latest article was by James E. Pollock.²

During the past year I have used intramuscular ether injections rather extensively in pertussis cases with gratifying results and especially so in cases with complications. In families where there was more than one child with pertussis a comparison of the results with ether and vaccine would be made. The child with the most severe symptoms would receive the ether injections. In all cases the ether proved the more effective treatment. The response in most cases was noticeable after the first injection but occasionally not until the third injection had been given. So far as I was able to determine there were no ill effects other than the ordinary muscle soreness.

It will not be necessary to go into detail regarding the dosage and the method of administering the ether as you are all familiar with this line of treatment, but I do wish to emphasize the importance of using fresh ether and large doses, given deep into the gluteal muscles.

There has been considerable comment on the danger of necrosis of tissue at the site of injection but I failed to see more than one bad result in my series of 78 cases, and this was due

to faulty technique. It is very important in giving these injections to insert the needle deep into the muscles of the upper gluteal area and to inject the ether slowly until the entire amount has been expelled from the syringe before withdrawing the needle. A finger is placed over the puncture wound to prevent the escape of the ether and the area is lightly massaged. It is also very essential that some one besides the mother hold the child so that the child will be as quiet as possible until the injection is completed.

The following three cases will illustrate the general results obtained with ether injections in complicated pertussis.

REPORT OF CASES

Case 1. A boy, aged 9 years had been coughing spasmodically for three weeks and was quite ill for three days. The coughing was severe, vomiting with each paroxysm. He had been unable to lie down for two days due to shortness of breath.

Examination. Poorly nourished boy, sitting in reclining position. Breathing rapid and dyspneic. The skin was dry, the lips cyanosed. Heart action very rapid. Enlarged heart, rapid but regular with very impure heart sounds but no murmur present. Lungs congested both front and back with areas of bronchial breathing and crepitant rales.

Diagnosis. Cardiac dilatation, whooping cough and pneumonia.

This boy was put on general pneumonia regime with an immediate injection of ether. In the same family were two smaller children, a boy three and a baby nineteen months, both in their third week of pertussis. These children were given vaccine.

The following day the oldest child was so decidedly improved that another ether injection was given. The cyanosis had entirely disappeared, the cough was better and breathing easier. With each subsequent injection there was a steady improvement. There was such a decided improvement at the end of a week that the parents insisted on the smaller children receiving the ether injections, as their cough had not improved with the injections of vaccine. I waited, however, until the twelfth day before consenting. The infant had by this time a severe bronchial involvement. The ether injections were just as effective with these children as with the older boy.

Case 2. Infant aged ten months was seen on the fifth day of illness; had been coughing for seventeen days. Examination showed an extremely ill infant, well developed and nourished, skin dry and hot but no cyanosis. Breathing was rapid and labored with dilatation of the alae nasi. The lung findings were those of a bronchopneumonia. An initial dose of ether was administered and repeated in six hours because there was very little improvement. The following morning the breathing was much easier and the infant looked decidedly improved. Four subsequent injections were given before the infant was sufficiently recovered to discontinue treatment. A boy aged four years in the same family with pertussis was given the vaccine with only slight improvement in the cough after ten days.

Case 3. A boy aged of five years was brought to the office by his mother and father. They stated that he had had the whooping cough ten weeks during which time his condition had become progressively worse. Their family doctor had informed them that there was nothing to be done as whooping cough

1. Dorgatz, F. E.: J. Kansas M. S., 1924.

2. Pollock, James E.: N. O. Med. and Surg. J., 1926.

would have to run its course. For the past four weeks the boy had very severe paroxysms of coughing at frequent intervals, choking at times and always bringing up large quantities of pus. He had a temperature during these four weeks with an evening rise. His temperature at this time was 103 degrees.

Examination. An undernourished, pale anemic boy. Appeared quite ill. Eyes and nose inflamed. The skin about the nose was red and swollen, mucous lining of the nose quite swollen. There was a drooping of the shoulders and a noticeable rounding of the chest, almost barrel shape. During the examination a paroxysm of coughing occurred, the most severe I have ever witnessed. Pus was expelled through the nose as well as from the mouth. Lungs gave a hyperresonant note both front and back except at the left base where the percussion note was quite dull. Bronchial rales throughout the chest except over this area of dullness where the sounds were faint and distant. X-ray showed a dense shadow over the left lower lung.

Diagnosis. Lung abscess.

On consultation thoracentesis was advised, but as the boy seemed somewhat better after an injection of 4 cc. of ether it was postponed. The cough gradually subsided and expectoration lessened. There was such a decided improvement after the second ether injection that the idea of a thoracentesis was dismissed. Examination of the pus showed no tubercle bacilli. The boy was kept in bed under strict supervision until the temperature had remained normal for three days. On the seventeenth day the boy was discharged apparently recovered. There was no subsequent X-ray taken.

CONCLUSIONS

1. In my hands ether injections have been the most effective treatment in complicated pertussis.

2. Large doses of fresh ether given daily or every other day give the best results.

3. No ill effects were noted in this series of cases either with large doses or repeated doses.

1806 Federal Reserve Bank Bldg.

ANATOMICAL AND POSTURAL VARIATIONS OF THE LUMBO-SACRAL SPINE*

E. H. SKINNER, M.D.

AND

E. R. DEWEESE, M.D.

From Roentgen Department, St. Mary's Hospital
KANSAS CITY, MO.

1. The lumbosacral junction and the dorso-lumbar junction are transitional regions and the adjacent vertebrae may partake of anatomical characteristics of either vertebral region. Thus, we have sacralization of the fifth lumbar with wide variations in the outlines of its transverse processes. Conversely, the first sacral segment may rise from the pelvis and show lumbar anatomical outlines, and the appearance

of six lumbar vertebrae. More than 15 per cent. of *normal symptomless* spines exhibit these anatomical variations.

2. Failure of the anatomical neural arches of the fifth lumbar and certain upper sacral segments to close with a definite spinous process occurs in the symptomless normal spine in more than 10 per cent. of routine X-ray examinations of spines. This is known as *spina bifida occulta*.

3. A purely postural, symptomless, scoliosis or rotation of the lumbar bodies occurs in normal individuals who stand or sit carelessly. Occupations may produce this scoliosis where certain attitudes of the spine are constantly and persistently assumed and maintained.

4. Hard working individuals, male and female, such as laborers, farmers, switchmen, miners, longshoremen, freighters, show lumbar curves or lists which are purely postural.

5. After the fortieth year of life, many hard working individuals show variations in the text-book spine due to postural plus the hypertrophic concretions or calcific additions to the vertebral bodies. These so-called spurs may be purely histologic. They are crystallization of lines of force as a result of stress and strain. They are not invariably the result of infection and cannot always be the result of infection.

6. Spur formations as above described may be incidental to age as well as occupation and posture.

7. Separate centers of ossification may occur at the first lumbar segment with the resulting radiographic appearance of a fractured transverse process. A thirteenth rib may be substituted for the first lumbar transverse process.

CONCLUSIONS

The interpretation of X-ray negatives of the spine after injury should observe a wholesome regard for the above and other anatomical, postural and chronologic variations of the normal spine, all of which may be encountered in individuals without symptoms.

Rialto Bldg.

RELATION OF ANAPHYLAXIS TO IMMUNITY

One of the debated questions in immunology is the relation of acquired hypersusceptibility to acquired immunity. W. H. Wanwaring, Ralph W. Wright and Phil W. Shumaker, Stanford University, Calif. (*Journal A. M. A.*, April 24, 1926), thought to throw light on this question by studying the relationship between the sensitizing antibody and the immune antibodies in the dog, an animal not yet used in such comparisons. They found that the difference between the sensitizing antibody and the immune antibody is not merely a quantitative one. The two antibodies apparently have wholly different physiologic properties.

*Read at the Clinic Meeting, Jackson County Medical Society, April 13, 1926.

THE JOURNAL

OF THE

Missouri State Medical Association

DECEMBER, 1926

EDITORIALS

1927 LEGISLATURE—LOOKING FORWARD

A comprehensive program of legislation will confront the 184 members of the General Assembly when the lawmakers convene at Jefferson City on January 5. The personnel of the House of Representatives will be made up of 179 Republicans and 171 Democrats. The Senate will have 21 Democrats and 13 Republicans. There are three candidates for Speaker of the House. They are Jones Parker, St. Louis, who presided over the destinies of the last House, Edward Winter, Warrenton, and O. J. Page, Springfield.

Lieutenant-Governor Phil Bennett, Springfield, will wield the gavel in the Senate. Senator William R. Painter, Carrollton, and Senator Nicholas Cave, Fulton, are candidates for president pro-tem of the Senate. Senator Michael Casey, Kansas City, may also be a candidate.

There are seven physicians in the legislature, one in the Senate and six in the House. Five of the seven physicians are members of our Association. One osteopathic physician is a member of the Senate and five druggists and one dentist are members of the House.

Many measures to reform the legal and administrative processes of state government will be introduced. The Missouri Association for Criminal Justice will offer a sheaf of bills to simplify and strengthen the state's system of preventing crime, apprehending and convicting criminals and safeguarding the general public.

The Association for Economy in Public Expenditures will present proposals to reduce the number of bureaus and commissions, place the state government on a budget basis and establish a central purchasing board to do all the buying. The program of this organization, which was sponsored by the Associated Industries of Missouri, will probably meet with much opposition not only from the politicians but from the boards of the educational institutions who control the state university and the four teachers' colleges. Their principal objection arises from the suggestion of a state purchasing agent who will make all requisitions for the educational and eleemosynary institutions.

In the proposed plan for the abolishing or consolidation of the present 123 boards and commissions now existing, it is intended to legislate them all into ten divisions. The State Health Department will be one of the units taking the place of the board of health. The principal officer will be the secretary. There will be an advisory board composed of seven physicians. The Department of Health will have divisions for vital statistics, sanitation, child hygiene, a bacteriological division, and will supervise all investigations of social diseases as well as the work for the prevention of blindness. The Pure Food and Drug Department of the state government will be merged with the Department of Health. Under the consolidation idea, a feature that may occasion much discussion is the examination of medical students. A Department of Education and Registration is to be created. A director of education, to be appointed by the Governor, with a board of regents composed of seven members will conduct all examinations, medical or otherwise, where the law requires a state license.

The program of the Association for Economy in Public Expenditures is pretentious, to say the least. Its appeal to our lawmakers will be watched with interest.

The proposed amendments to the medical practice act, to be submitted to the General Assembly by the Missouri State Medical Association, should meet with the approbation of the layman. Much has been written about the diploma mills where ignorant, irresponsible, untruthful and inexperienced men have purchased their diplomas from dishonest educators. The sick need real medical advice. This only should be given by men who can diagnose the ailments through experience obtained from medical training at reputable medical colleges. The featured amendments to be presented by the State Medical Association will enact a section requiring applicants for licenses to practice medicine in Missouri to have attended at least four terms of nine months each and to have received a diploma from some reputable medical college. It is doubtful if there will be any honest disapproval of such a law to protect the sick. A digest of all the amendments to be introduced by us appeared in our September issue.

A measure to compel motorists to carry liability insurance will be introduced. Similar acts will be presented to legislatures in many states this winter. Whether such a statute will lessen automobile accidents is problematical. Only experience will tell.

Two years ago, much of the time of the legislature was consumed on what was known as the "Bus" Bill. This act was to regulate the

bus traffic. The Assembly adjourned before a decision was reached. The fight will be renewed at this session.

Governor Baker seeks additional revenue for the educational institutions. He hopes to obtain this money from a special tax on movies, tobacco and on the lead and zinc output in Missouri. Some months ago, the chief executive of the state and some of his friends proposed to submit this revenue raising plan to the voters through the initiative but later decided to appeal to the legislature for this aid.

It is understood that organized labor will ask for a constitutional provision to modify the initiative and referendum, it being the contention that the law now offers too great an opportunity for fraud in the securing of names either to the initiative or the referendum petitions.

The Missouri Bankers Association will ask for legislation to safeguard financial institutions. The bank failures, especially in the rural communities, have been appalling this year.

Bills for a state constabulary and a fire marshal will be introduced. The patrolling of the highways, it is said, is now needed. In 1913, a measure to create a fire marshal was introduced in the legislature with a view of lessening the arson crimes in this state but the act never reached the governor for his signature.

The Missouri lawmakers will be asked to provide the necessary legislation to pension the police in St. Louis, Kansas City and St. Joseph. The voters, by a tremendous majority, approved this pension for our police but the legislature must enact a law to make it workable.

The appropriation bills, of course, will have to be approved. This is a big task. Then again the old "Chiro" bill will make its biennial appearance as will countless other measures which never get any further than engrossment.

We can "look forward," however, to a busy winter at Jefferson City. We will be there until the hills in the Kingdom of Callaway show a semblance of emerald hue as the first indication of spring.

SOUTHWESTERN BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION

The Sixth Annual Meeting of the Southwestern Branch of The American Urological Association was held at St. Louis, November 1 and 2 under the presidency of Dr. H. McClure Young, St. Louis. This meeting will long be remembered by the visiting urologists

who attended, on account of the splendid hospitality shown by the urologists of St. Louis.

The mornings of November 1 and 2 were spent at the various hospitals, witnessing highly interesting clinics by the local urologists. Scientific programs occupied the afternoons of both days. Spirited discussion which was accorded each paper served to make an unusually successful program. The following presented papers:

Dr. H. King Wade, Hot Springs, Ark., "Treatment of Acute Gonorrheal Epididymitis, With Special Attention to the Prevention of Ozoospermia."

Dr. H. McClure Young, St. Louis, "Some Random Observations on Urology."

Dr. Arbor D. Munger, Lincoln, Nebr., "Conservative Surgery of the Traumatic Kidney."

Dr. Otto J. Wilhelmi, St. Louis, "Bladder Tumors and Their Treatment by Fulguration."

Dr. Grayson Carroll, St. Louis, "The Treatment of Bladder Tumors."

Dr. Harry Wear, Denver, Colo., "Congenital Dilation of the Anterior Urethra, With Report of a Case."

Dr. John Mraz, Oklahoma City, Okla., "Congenital Urinary Incontinence in the Female. Operation for the Control of, With Report of a Case."

Dr. D. K. Rose, St. Louis, "Cystometric Bladder Pressure Determinations. Their Clinical Importance."

Dr. Nels Ockerblad, Kansas City, Mo., "A Method of Preventing Colic or Spasm Following Ureteral Instrumentation, or Pyelography."

Dr. Walter Schulte, Salt Lake City, Utah, "An Unusual Case of Ureteral Obstruction."

The following officers were elected for the ensuing year: President, Dr. Nels Ockerblad, Kansas City, Mo.; vice president, Dr. H. King Wade, Hot Springs, Ark.; secretary-treasurer, Dr. Clinton K. Smith, Kansas City, Mo. Kansas City, Mo., was selected as the next meeting place.

NEWS NOTES

Dr. Frank R. Teachenor, Kansas City, was re-elected treasurer of the Western Surgical Association at the annual meeting held in Duluth, October 14, 1926.

Dr. E. Lee Myers, St. Louis, was a guest of the Cincinnati Oto-Laryngologic Society, November 9, and delivered an address on "Foreign Bodies in the Air and Food Passages."

The State Board of Health has revoked the license of Dr. S. E. Ball, Excelsior Springs, owner of the Ball School of Health. Testimony showed that Ball had solicited patients in various ways. One witness testified that he made misrepresentations to induce patients to go to the Ball Sanitarium.

The C. V. Mosby Company, St. Louis, the pioneer western medical publishers, have purchased the building owned by the St. Louis Medical Society at 3523-25 Pine Boulevard and moved their offices into their new location.

Friends of Dr. Ira W. Seybold, Poplar Bluff, will regret to learn that he died suddenly at his home, November 12, from disease of the heart. He was apparently in good health when the attack seized him.

Dr. W. T. (Pat) Coughlin, St. Louis, read a paper before the Western Surgical Association in Duluth, October 15, on "Plastic Reconstruction of the Axilla in the Operation for Cancer of the Breast: Report of Author's First Fifty Cases."

According to press dispatches from Jefferson City, State Security's Commissioner F. T. Stockard has prohibited the promoters of the Buffalo Lithia Springs Corporation from making any further attempts at selling stock of the corporation in Missouri.

Dr. C. F. Pfingsten, St. Louis, has been elected a member of the stockholders advisory board of the Security National Bank. Dr. Pfingsten is associate professor of diseases of the ear, nose and throat, in the Medical Department of the St. Louis University.

The St. Louis Medical Society has elected the following officers for the year 1927: Charles A. Vosburgh, president; John Green, first vice president; William H. Mook, second vice president; Roland S. Kieffer, secretary. These officers will assume their duties at the first meeting January, 1927.

Regulations concerning the writing of prescriptions for whiskey have been modified by the Secretary of the Treasury so as to provide that physicians need not specify on the prescription blank the name of the druggist. This space is to be left blank in form 1403 when writing prescriptions for whiskey so that the prescription can be filled by any druggist who is authorized to dispense whiskey.

St. Louis College of Pharmacy has begun a campaign to raise a fund of \$300,000 for the erection of a new building and the establishment of a medicinal plant garden. Two large donations have been made to the fund, one for \$50,000 by Wm. R. Warner & Co., manufacturing pharmacists, of St. Louis and New York, and one for \$25,000 by the Lambert Pharmacal Company, of St. Louis.

Physicians of St. Louis specializing in diseases of the heart have incorporated under the name of the St. Louis Heart Association as a philanthropic society. The object of the association is to study the causes, treatment and prevention of heart disease. The officers are Dr. Hugh McCulloch, president; Dr. Arthur E. Strauss, secretary, and Dr. Drew Luten, treasurer. These officers, with Drs. Elsworth Smith and Ralph A. Kinsella, constitute the board of directors.

The St. Louis Maternity Hospital building, which is a unit of the Washington University group of hospitals, will be one of the finest institutions for obstetrical research in the country when it is completed in June, 1927. Dr. Fred J. Taussig, St. Louis, is chief of staff. The cost of the building will be \$750,000. One entire floor will be devoted to research laboratories, under full time experts, this being made possible by a gift of \$650,000 from the Rockefeller Foundation. This entire sum must be used in obstetrical research work. The Maternity Hospital was established in St. Louis as a private hospital in 1908.

Seven physicians are members of the Fifty-Fourth General Assembly, which convenes in Jefferson City, January 5, 1927. There is one osteopathic physician, five druggists, and one dentist. The physicians are: Dr. Guy B. Mitchell, Branson, Senator from the 19th District. In the House of Representatives are Drs. J. W. Holliday, Sr., Atchison County; C. H. Wallace, 1st District, Buchanan County; A. H. Baldwin, Cass County; D. A. Pollard, Henry County; Edward L. Barnhouse, Iron County; B. E. Latimer, Wright County. Of these, Drs. Guy B. Mitchell, J. W. Holliday, Sr., C. H. Wallace, A. H. Baldwin, D. A. Pollard, and B. E. Latimer are members of our Association.

Governor Baker has appointed the Workmen's Compensation Commission, who will administer the new workmen's compensation law adopted by the people at the last election. The members of the commission are: Alroy S. Phillips, St. Louis, chairman of the commission; Evert Richardson, Granby; Orin Shaw, Jefferson City. Dr. George A. Auerswald, DeSoto, has been appointed medical adviser to the commission. Each commissioner will receive a salary of \$4,500 and the medical adviser will receive \$4,000. The act provides that all fees and charges shall be fair and reasonable, shall be subject to regulation by the commission, and shall be limited to such as are fair and reasonable for similar treatment of injured persons.

of a like standard of living. The commission also has jurisdiction to determine all disputes as to such charges.

In May next year a group of physicians with members of their families from the United States and Canada, under the direction of the Inter-State Post-Graduate Medical Association of North America, will sail from New York to visit the leading medical centers of the Old World. This will be the third year that foreign assemblies have been conducted under the auspices of this organization. Those of 1925 and 1926 were exceedingly successful and of great benefit to the physicians who took advantage of them.

The price of the trip, which will be kept as low as possible and yet furnish first class accommodations, will be between \$1,000 and \$1,100. Further information may be obtained from the Managing-Director, Dr. William B. Peck, Freeport, Illinois.

A suit against Dr. E. W. Cavaness, city health director of Kansas City, and O. C. Murphy, food and dairy commissioner, for contempt of court was dismissed by Judge Coon, November 20. Judge Coon had issued a restraining order prohibiting the city authorities from interfering with the dairy activities of L. K. Hebel, charged with selling milk contaminated from a polluted spring on his dairy farm thus causing the milk to become a source of typhoid fever. In spite of the restraining order, the health director and the food and dairy commissioner sought to prevent the sale of milk from Hebel's dairy. In declining to issue a citation of contempt against the city officials, Judge Coon said: "If the defendants had good reason to believe that the milk being sold by Hebel was of such character as to endanger public health, they had the right under the police power of the city to prevent the sale. While technically the letter of the restraining order may have been violated, this court is not so sensitive of its power as to stand in the way of officers in protection of the public health."

Judge Coon is to be congratulated upon his decision not to permit the technicalities of the law to interfere with the duties of health officers in protecting the public health.

If you bear a name which appears upon early tax lists in the larger cities you may be solicited to join organizations of "heirs." These organizations purport to further the rights of others than the present holders of valuable real estate parcels. Their organizers seem to give little weight to the fact that real estate has been

bought and sold for many years upon the basis of very full title search and that such titles are often fully insured. Some months ago the News wrote upon the legend regarding the early history of Wilmington, Delaware, which has led some members of the Springer family to hopes which seem unlikely to be realized.

From Kansas City comes a report of the offering of memberships in an organization of Anneke Jans Bogardus' descendants. Again the hopes involve property near Trinity Church in the financial district of New York City. In June, 1847, judgment was rendered in favor of the Trinity Church Corporation in a suit brought by Bogardus heirs. A second suit brought in 1901 in the Supreme Court of New York was dismissed.

Willis T. Gridley is reported as the promoter at Kansas City. Gridley was disbarred in January, 1918, for "solicitation of contributions to finance investigation knowing there was no chance of success" after a hearing before the Appellate Division of the Supreme Court of New York. His "solicitations" at that time were likewise made to Bogardus' descendants. —*Better Business Bureau News*.

OBITUARY

WILLIAM DEVINE DAVIS, M.D.

In the death of Doctor William Devine Davis, St. Louis, on May 20, 1926, the St. Louis Dermatological Society suffered the loss of one of its valued members.

Dr. Davis was born in Terre Haute, Indiana, on August 29, 1887, and received his degree in medicine from Washington University Medical School in 1909, after which he served as intern at the St. Louis City Hospital for two years and at the old Female Hospital for one year. He then engaged in general practice, but when this country entered the Great War, he was among the first St. Louis physicians to volunteer for service. He served over seas for two years, being honorably discharged with the rank of captain, Medical Reserve Corps. At the time of his death he held the rank of major in that corps.

On his return to private practice he turned his attention to dermatology and was admitted to membership in this society in February, 1920. At the time of his death he was connected with the department of dermatology in the medical school of St. Louis University. He was one of the originators of the Davis treatment for pemphigus.

Dr. Davis was ever loyal to his brethren and to the high ideals of our calling. Among his

outstanding qualities was his enthusiasm for clinical dermatology. He was of a genial disposition, pleasant and courteous of manner and kind of heart. We mourn his early removal and tender his family the expression of our profound sympathy.

ROBERT H. DAVIS,
R. S. WEISS,
JOSEPH GRINDON,
Committee.

CORRESPONDENCE

SUCCESSFUL COUNCILOR DISTRICT MEETING

West Plains, Mo., Nov. 24, 1926.

To the Editor:

We had a wonderful meeting of the 24th, 26th and 27th Councilor Districts in Willow Springs, November 19, and I am sending you a copy of the minutes.

The first meeting was so successful that we thought it well to ask you to urge that the plan of Councilor District meetings be carried out all over the state.

A. H. THORNBURGH, M.D.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1926

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID DUES FOR ALL THEIR MEMBERS)

HONOR ROLL

Camden County Medical Society, November 23, 1925.

Howard County Medical Society, January 8, 1926.

Chariton County Medical Society, January 20, 1926.

Reynolds County Medical Society, February 22, 1926.

Ralls County Medical Society, February 27, 1926.

Madison County Medical Society, March 16, 1926.

Schuyler County Medical Society, March 25, 1926.

Franklin County Medical Society, March 29, 1926.

Howell-Oregon Medical Society, April 7, 1926.

Webster County Medical Society, April 7, 1926.

Monroe County Medical Society, April 14, 1926.

Platte County Medical Society, April 23, 1926.

Atchison County Medical Society, April 26, 1926.

Saline County Medical Society, May 15, 1926.

Carter-Shannon Medical Society, June 28, 1926.

Bates County Medical Society, September 17, 1926.

Laclede County Medical Society, October 13, 1926.

Pettis County Medical Society, October 19, 1926.

PROCEEDINGS OF KANSAS CITY ACADEMY OF MEDICINE

March 19, 1926

1. ACUTE BENIGN LYMPHADENOSIS.

Report of two cases.—By DR. THOR JAGER.

DISCUSSION

DR. H. R. WAHL: These cases do not come to autopsy and I do not have an opportunity of studying the tissue. I have, however, run across one case which I believe was of this type. A patient in one of the hospitals had a count of 48,000, the differential showing from 65 to 70 per cent. lymphocytes, many of which were peculiar in type. The doctor intended to treat the patient with X-ray for leukemia. I found out by questioning the doctor that the spleen was somewhat enlarged and suggested that it might be an example of infectious mononucleosis. The patient left the hospital in about three weeks considerably improved. I have lost track of him since then. I do not know whether this was one of these cases or not. Lesions have been found in cases reported where the patient died from an intercurrent infection and not from this disease and only a hypoplasia of the lymphoid tissue noted. The statements do not seem to be clear as to the cytological changes in the glands. Possibly there are some changes in the cells that may be characteristic. I think it is unfortunate that there is some confusion in the terminology of this condition. Some people claim glandular fever is somewhat similar, though this is open to question. Others call it infectious mononucleosis, and the more recent term is chronic lymphadenosis.

DR. ELMER D. TWYMAN: Although this is not a surgical subject there is a lesson in it for me. Dr. Jager has presented one more nonsurgical cause of acute abdominal pain. One of these patients, he tells me, came to the hospital with a diagnosis of acute appendicitis. To avoid error surgeons must always have in mind the possible nonsurgical causes of abdominal pain.

2. X-RAY EXAMINATION OF CHEST.—

By DR. L. G. ALLEN.

DISCUSSION

DR. S. H. SNIDER: The radiograph is a more or less reliable record. I think that 75 per cent. of the physicians who refer patients for a radiograph of the chest for diagnosis are prone to read the report alone for the diagnosis and then they tell patients that this or that condition is present. We must remember that the radiograph is not the picture of all the conditions and not a complete picture of the condition present in the chest. The radiograph is an invaluable clinical record to be accepted as one of the clinical observations, but is only one. I insist that an examination of the chest for the diagnosis of tuberculosis is never complete unless we have a radiograph.

The radiographic examination of the chest is not at all complete with the fluoroscopic examination. The fluoroscope is of great value to show motion and function. But to show structure and details of structure I insist upon having radiographs. If I had

only one of the two I would prefer to have a plate and not have a fluoroscopic examination.

We have other means of finding out whether or not tuberculosis is active, quiescent or arrested, and these means are far more reliable. The pulse rate, temperature curve, physical findings and consideration of the whole clinical picture and its signs and symptoms are a better index.

I have in mind a young lady whom I took as a patient in the fall of 1922. She had extensive tuberculosis in both lungs, a "snow-storm" in both sides of the chest and a cavity in the left lung. We collapsed the cavity and the other lung did the nicest bit of clearing up I have ever seen. There were a great number of medium rales in the right lung, which cleared up. I recently saw her and the lung that had been collapsed was almost clear of rales and the snow-storm that existed in the right chest had completely disappeared except for a little bit. There is now so little in the right chest that the physician does not know whether there is any pathology there.

If there is active, progressive tuberculosis without any radiological manifestations you can make very sure that these findings are very uncommon. More often a lot of pathology is shown on the X-ray plate, with few physical signs. If I were confined to using the X-ray plate or listening to the chest alone, I would choose the X-ray plate.

DR. EDWARD H. SKINNER: I think it is very fortunate in this territory that we have no chests that have not been subjected to smoke, industrial dusts, etc. The X-ray men in Pennsylvania and Virginia have a much harder problem than we have here. Think of the differential diagnostic difficulties in the granite worker's chest.

The technical problems that have been shown here tonight are problems that come throughout the X-ray field. Appreciation of these problems by the clinician is certainly worth while and should promote a wholesome regard for excellent technique.

April 16, 1926

3. ESOPHAGEAL OBSTRUCTION.—By DR. VICTOR E. CHESKY.

The etiology of esophageal obstruction is cicatricial stricture, cardiospasm, neoplasms especially carcinoma, foreign bodies, diverticula, stenosis and hysterical dysphagia.

Our cases of cicatricial stricture ranged from 15 months to 12 years of age and had swallowed lye from 2 months to 10 years previously.

Treatment following lye ingestion is never given early enough to prevent injury to the esophageal mucosa. Dysphagia usually appears in from 6 to 8 weeks but may not appear for years.

The treatment is gradual dilatation with olive tipped bougies threaded on a silk thread, five or six yards of which has been previously swallowed by the patient. Silk thread will find its way through the smallest stricture, if swallowed slowly. The smallest olive is passed first and the size gradually increased until size 45 French is reached. The interval between dilatations is then lengthened until once a year is sufficient. This method of dilatation insures against perforation and obviates the necessity for esophagostomy.

CARDIOSPASM

Cardiospasm, next to cancer, is the most frequent cause of obstruction which may be so complete as to prevent the swallowing of water.

The ages of our patients range from 24 to 75 but

ages of 5 to 83 are reported. The majority are between 30 and 40.

The etiology of cardiospasm is not known and nothing suggested can be proved.

The symptoms develop gradually with a stopping of the food bolus just before entering the stomach. There is no regurgitation and it finally goes through. Dysphagia, regurgitation and salivation follow. The patient loses weight and becomes anemic. Death from starvation may occur.

In the diagnosis carcinoma must be excluded. With cardiospasm the esophagus is dilated its full length and ends in a smooth conical point. With cancer the barium cuts off irregularly, often with a small irregular string of barium extending through to the stomach. The duration of symptoms often excludes malignancy.

The treatment is dilatation of the cardia to the extent of paralyzing the sphincter. A hydrostatic dilator is passed partially through the sphincter, being guided on a previously swallowed silk thread. About 25 feet of water pressure are used in the dilatation, the water being allowed to attain this pressure slowly. Two dilatations, 3 to 4 days apart, are sufficient. The dilatation is always painful but is done without anesthesia.

The results are immediate and good but the dilatation is not entirely without risk.

DISCUSSION

DR. JAMES G. MONTGOMERY: Practically all esophageal strictures are in young individuals or were acquired in youth by swallowing lye. There are less strictures from swallowing lye now than previously when soap was made in almost every back yard. Lye contained about 94 per cent. concentrated alkali. We now have on the market various cleaning fluids containing from 8 to 50 per cent. concentrated alkali. These cleaning fluids are not properly labeled as to their corrosive action and are frequently left in reach of children. Certain states properly require poison labels to be put on cleaning fluids of this type.

The chief symptoms, dysphagia and regurgitation, are in proportion to the caliber of the esophageal stricture. The food ingested necessarily becomes continuously more liquid until finally fluids are taken with difficulty. At this time the emaciation from loss of weight compels the patient to present himself for treatment.

The pathology of esophageal strictures is divided into the acute and cicatricial stages. The acute is characterized by pain, swelling, redness and bleeding followed by necrosis and ulceration. The cicatricial stage is the resultant healing of the acute stage, by connective tissue. The severity of strictures depend on the depth of the burn. They may be single or multiple and located in any portion of the esophagus. The constriction may be short or elongated. There is a considerable amount of thickening of the esophageal walls in the region of a stricture with dilation above this point.

The diagnosis of these cases is made from the history of swallowing some caustic solution, usually a concentrated alkali, followed in later years by dysphagia, regurgitation and loss of weight. The location, size and deviations of the stricture can usually be demonstrated with the X-ray.

As to the treatment of these cases, I believe with McKinney that these patients are never normal after a cicatrix is formed. Also that once a patient with a stricture of the esophagus, always one. On the other hand, the Mayo Clinic, in 1917, reported satisfactory results in dilating one hundred twenty four cases with six deaths following instrumentation. These

patients are always benefited by dilatation, therefore the problems we are interested in are: when to start dilating, how often and how much to dilate. Dilatation, according to Vinson should not be carried out under eight weeks following the acute stage.

When a stricture is dilatable, according to the size of the patient, the esophagus should be dilated sufficiently (30 F.) to permit the passage of any type of fairly well masticated food. The dilatations should not be repeated more often than is necessary to take care of the patient's dysphagia. No anesthetic should be employed when dilating any type of esophageal stricture as pain will prevent excessive traumatism, which is contraindicated. The esophagus, on the other hand, is relatively insensitive to pain and the conscious patient has marked voluntary control of the pressure within the esophagus through the muscles of respiration and changes intrathoracic pressure making dilatation often difficult without some relaxation.

The dilatation of esophageal strictures may be carried out with the esophagoscope according to Jackson, but better for the average man in this field of work is the method of bogies as carried out in a similar way by various authors.

In brief, the method of Sippy has been found quite satisfactory. Sippy, as other authors, first makes an X-ray study of the tract where possible. He then has the patient swallow a silk thread as a guide. This guide may not be necessary later when the operator is quite familiar with the tract. In dilating, the operator should have his patient on the fluoroscopic table, using the X-ray when necessary. The operator should pay heed to the pain the patient is having, as perforation of the esophagus is always a possible complication, even though thickening the esophageal wall in these cases and the relative insensibility of the esophagus permit rather vigorous treatment.

DR. P. T. BOHAN: I have seen only a couple of cases of obstruction of the esophagus due to lye. This usually happens in children. It is not a difficult thing to get a child, even when quite young, to swallow a thread if correctly done. The chief trouble is to keep the thread from snarling. The best way to prevent this is to see that not more than ten or twelve feet are swallowed, and swallowed at the rate of eight or ten inches an hour. When the thread passes the stricture the treatment is easy and the dilatations can be done with a minimum of danger.

I wish to disagree with a statement made by Dr. Montgomery that it is a difficult matter to rupture an esophagus. The esophagoscope should never be used in cases of malignancy, whether for purpose of diagnosis or treatment. I have seen ruptures produced when it was used by experts.

Regarding cardiospasm (as has been stated by Dr. Chesky), a discussion of the etiology leads us nowhere. I was much surprised to find that Dr. Vincent says that in his experience cardiospasm is seldom associated with any pathological condition in the abdomen. A definite percentage of the cases we have seen have been associated with peptic ulcer or gallbladder disease.

The symptoms of cardiospasm are not the same in all patients. In addition to the symptoms given, I would like to mention two other symptoms that may occur and be misleading; first, a profuse secretion of saliva, occurring during sleep; second, epigastric or substernal pain. The pain may be so severe that it can be confused with gall stone colic.

In the treatment of these patients we use Sippy dilators. About one half of the cases are relieved,

apparently permanently, with one or two dilatations.

DR. CHESKY, in closing: It is seldom that we have been able to ascertain the etiology of cardiospasm. A few of our cases have coincided with those of Dr. Bohan, that is, that we have seen cardiospasm associated with gastric ulcer.

I use the Plummer dilator with the spiral wire on the end below the dilating olive instead of above it, as described by Drs. Bohan and Montgomery. The spiral is flexible and follows the irregularities of the stricture well. I believe it is a better dilator.

I think there is great danger of perforating the esophagus in attempting dilatation blindly without some guide. It seems to me that it is easily perforated. If I cannot get some guide through the stricture to follow, I will not attempt dilatation.

4. CLINICAL STUDY OF INTESTINAL OBSTRUCTION WITH DEDUCTION FROM THE FINDINGS.—By DR. B. L. MYERS.

During the period of two years—1923-1924, there were 7,834 patients registered at St. Mary's Hospital, Kansas City, Mo. Eighty six hundredths of one per cent. (0.86%) of these were diagnosed intestinal obstruction. The mortality rate was 48 per cent. for the two years, though it was 15.5 per cent. less in 1924 than in 1923.

It is the writer's belief that this improvement is not due to greater skill on the part of the surgeons or to any important change in the personnel of the surgical staff. Nor does it appear to be due to the fact that the patients were obtained at an earlier date after the obstruction or in more favorable conditions. The evidence leads to the conclusion that this decrease in the mortality rate was due to a more careful investigation of the toxic states of the patients and to a more detailed and accurate attention to the things which combat the autointoxication before surgery was employed.

It should not be forgotten that the problem in intestinal obstruction is one of toxicity, as is the case in hyperthyroidism or prostatic obstruction, and the toxin, whatever it may be, is just as deadly and oftentimes more speedy in its effects.

The method of treatment requires very careful judgment. No one will deny that the best time to operate is before the patient has become toxic. If the patient is obtained early the surgeon may proceed at once to relieve the obstructed bowel, but if the patient has become dry skinned, dehydrated, is vomiting and has a blood picture showing low plasma chlorides, high urea nitrogen and an "invariable tendency to alkalosis," as McVicar warns us, haste should not be practiced. Detoxication is often of more importance than immediate surgical intervention.

It is the writer's opinion that in the presence of these abnormal states in the blood stream a minimum preoperative requirement might wisely be: a thorough washing of the stomach and the administration of 1000 cc. of sodium chloride solution, 1 per cent. or 2 per cent. by venoclysis, or 2000 cc. of normal saline solution by hypodermoclysis. A study of these cases indicates that the administration of chlorides by mouth or by proctoclysis preoperatively, or early postoperatively, is a useless procedure and does not save the patients, experimental deductions to the contrary.

DISCUSSION

DR. M. J. OWENS: I am particularly glad to know that the statistics Dr. Myers quotes compare favor-

ably with statistics from other hospitals, inasmuch as some of the recoveries and some of the deaths were among my own cases. The time was when we operated every case of intestinal obstruction immediately on its arrival in the hospital. Of course that was wrong. Experience has shown that a patient who is severely debilitated from toxemia can be very much improved by the methods Dr. Myers has mentioned. It is a mistake to operate on these patients immediately because so much improvement can be had from gastric lavage, salt solution by hypodermoclysis, etc. It is also a mistake to do one gastric lavage and await recurrence of vomiting before repeating. Lavage should be done every 2 to 3 hours until accumulation of fluids in the stomach ceases. High drainage by tube properly sutured into the intestine may be all that is safe to do as a preliminary to relief of obstruction. This bowel drainage has, I am sure, saved lives that would not have been saved if an immediate major operation were done without it.

DR. THOMAS G. ORR: This subject is more interesting to me than any subject we have had during the year. The treatment of intestinal obstruction is very closely associated with a knowledge of the physiology of the upper intestinal tract. I would like to call attention to one phase of the subject and that is the question of jejunostomy in the treatment of intestinal obstruction. We have been recently interested in jejunostomy and have had some rather interesting experiences from the experimental standpoint in the treatment of intestinal obstruction. Summers, Bonney, C. H. Mayo and others emphasize very strongly high jejunostomy in the treatment of intestinal obstruction. It is recommended to drain that portion of the gut containing most liquid. If an enterostomy is done lower down there possibly might not be much liquid. In experimental work we have taken a series of dogs, produced obstruction and drained the jejunum. You can obstruct the jejunum of dogs and they will live about ten days on an average. You produce the same type of obstruction and drain the jejunum and they will not live nearly so long. The question then arises whether or not it is safe to drain the jejunum. Patients may not react like animals or perhaps the drain in the jejunum in patients does not continue to drain. Dr. Brown, of El Paso, emphasized strongly the importance of passing a duodenum tube for drainage of the upper intestine. In duodenal fistula the mortality is 40 per cent. The administration of sodium chloride solution in drainage of the jejunum will prolong life in animals.

DR. MYERS, in closing: The question of exactly where an intestinal drain should be placed in the treatment of an obstructed bowel has been discussed for a good while. Some writers think the best place is in the jejunum, some choose a point just above the obstruction, others prefer the point of greatest distention. Dr. Draper, of New York, showed by experiments on dogs that the "lethal line" is just below the pylorus. Orally or aborally to this area, the toxicity does not seem to be so great. I do not believe that it has been unquestionably proved that fluids may be toxic in the portion of the bowel where they are produced but not elsewhere. Sterling Bunnell believes that the upper intestinal fluids, passing into the lower bowel, when absorbed add greatly to the toxic state of the patient, even if the obstruction has been released.

My plea in this matter is that we should be very considerate regarding the condition of our patients before we attack them too vigorously, especially after they have already become toxic. Dr. Narr, of Research Hospital, tells me that he considers the

tests for blood chlorides, urea nitrogen, and CO_2 combining power could be done in an emergency in from 30 to 40 minutes. Experience in this series of cases shows that the average patient is in the hospital 3 hours before operation. During such an interval we should investigate the toxic problem of the patient before we decide what we are going to do.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Kingston, October 29, at 2:00 o'clock, in the County Clerk's office. Present, Drs. G. S. Dowell, president; Tinsley Brown, secretary; W. S. Shouse, J. E. Gartside, H. H. Patterson, B. F. Carr and L. M. Daley.

Dr. C. C. Conover, Kansas City, was present by invitation and by vote was accorded the privileges of the Society.

The minutes of the meeting held at Hamilton, July 29, were read and approved.

Dr. Conover made an address on "Embolic Endocarditis" and illustrated the pathology of the heart with lantern slides. The address was very instructive and was a real treat. Dr. Conover was given a vote of thanks for his presence and his address.

A number of clinical cases were presented and examined.

The Society adjourned to meet in Polo at the regular meeting time in November if weather permits.

TINSLEY BROWN, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its Hal-low'e'n meeting at the Snapp Hotel, in Excelsior Springs, Thursday, October 28, beginning with noon dinner. About twenty eight members and wives were seated at the table. Mrs. A. B. McGlothlan, St. Joseph, state president Women's Auxiliary, was present and made an interesting talk to the ladies. The scientific session was held in the spacious parlors of the Hotel Snapp.

After the usual routine business, Dr. Hermon S. Major, Kansas City, delivered the address of the afternoon on "Treatment of the Nervous Patient." Dr. Major's familiarity with his subject made notes unnecessary in a talk of interest to every one present. He laid much stress on mental therapeutics, urging the utmost in attention to the patient to win his confidence. In many cases a minimum of drugs was necessary—a serious mistake to over drug. The doctor was positive in condemnation of narcotics, especially the habit formers; said he hadn't carried a hypodermic syringe for years. Absent members missed his excellent story on suggestion.

The subject was discussed by practically every one present and many cases were reported in line with the topic. Dr. Major answered questions like a Spartan. Our entire organization appreciated the presence of Mrs. Major, who was an interested visitor.

Our Ladies' Auxiliary elected Mrs. E. E. Peterson, Nashua, president; vice presidents in order, Mrs. J. H. Rothwell, Liberty, first; Mrs. F. H. Matthews, Liberty, second; Mrs. H. Rowell, Kearney, third; and Mrs. S. D. Henry, Excelsior Springs, fourth; Mrs. J. E. Musgrave, Excelsior Springs, secretary-treasurer.

We have one delinquent member.

J. J. GAINES, M.D., Secretary.

GENTRY COUNTY MEDICAL SOCIETY

The Gentry County Medical Society met at their regular monthly meeting in Albany with Dr. G. W. Whiteley, November 16, Dr. C. H. McCaslin presiding.

After discussing the proposed amendments to the medical practice act, they were unanimously approved. Other local questions were discussed and then the president called for the election of officers for the year 1927.

On motion the rules were suspended and Dr. C. H. McCaslin was re-elected president, Dr. J. A. Crockett was elected vice president, and for the twentieth time Dr. G. W. Whiteley was elected secretary and treasurer.

A motion to adjourn carried and the doctors hurried to the residence of Dr. J. N. Barger, where the Ladies' Auxiliary was in session. On arriving we were entertained for a short while with some very fine selections on the piano by Miss Cassie Larmer, sister of Mrs. Martin, president of the Auxiliary. Our host and his excellent wife, Dr. and Mrs. Barger, conducted us to some beautifully decorated tables where we were served with an excellent light luncheon. Mrs. Martin acted as toastmistress and called for some talks. These were given by various members and all of us enjoyed some hearty laughs at the jokes that were interspersed with the more serious topics so that a most pleasant and profitable evening was spent. We shall look forward to another occasion when our gracious and delightful hostess will entertain us.

Those present at the meeting were: Drs. C. H. McCaslin and J. A. Crockett, Stanberry; A. W. Paulette, King City; J. N. Barger, W. S. Campbell, W. T. Martin and F. H. Rose, and G. W. Whiteley, Albany.

G. W. WHITELEY, M.D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The regular meeting of the Lawrence-Stone County Medical Society was held at the State Sanatorium, Mt. Vernon, September 7, and was called to order by the president, Dr. J. Will Smith. The following were present: Drs. D. C. Adams, J. P. Andrews, W. J. Bryan, R. D. Cowan, W. I. Fulton, P. A. Holmes, W. M. Holmes, H. L. Kerr, W. S. Loveland, T. D. Miller, N. K. Pope, C. W. Shelton, J. W. Smith, F. S. Stevenson, and Dr. Schenck.

Col. W. P. Fulkerson, president of the State Board of Eleemosynary Institutions, was a visitor and delivered an address stressing particularly the present method of committing patients to the state institutions, and the importance of needed legislation in the manner thereof. He also emphasized the fact that the state institutions are conducted for the indigent, but he called attention to the fact that they are caring for many pay patients who, owing to the capacity of the state hospitals being insufficient, should be in private institutions. This answered the question as to why the board recently raised the price of caring for pay patients from \$20 to \$40 per month. Col. Fulkerson pointed out the urgent need of better classification of patients according to the clinical nature of cases. This cannot be done without more buildings; hence, the importance of a bond issue for this purpose. On motion the Society approved the proposition of a bond issue for more buildings for the state care of the sick.

Dr. H. L. Kerr, vice president of the state health board, addressed the Society on the importance of needed medical legislation, especially the passing of

the amendments to the Medical Practice Act as proposed by the legislative committee and approved by a number of county societies, this society having approved them at our last meeting.

Dr. Pope, of the State Sanatorium, presented a clinic showing successful results of a thoracoplastic operation, pointing out that a fit case for the procedure should have one fairly good lung with an established fibrosis of the lung to be operated. The two step operation is preferred.

The Society extended a vote of thanks to the management of the Sanatorium for courtesies shown.

T. T. O'DELL, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met in regular session, in the Chamber of Commerce Rooms, Moberly, Nov. 9, 1926, at 8:00 p. m., with the President, M. R. Noland, in the chair. The purpose of this meeting was to try to form the Tri-County Society.

Members present were: Drs. O. O. Ash, J. Maddox, L. A. Bazan, P. C. Davis, D. A. Barnhart, L. O. Nickell, L. E. Huber, L. Hunker, G. O. Cuppaidge, C. K. Dutton, C. C. Smith, C. H. Dixon, S. T. Ragan, R. D. Streeter, T. S. Fleming, F. L. McCormick, M. R. Noland. We were glad to have with us Drs. Flint, McMurry and Ragsdale, Paris, and Drs. Miller and Gronoway, Macon, also Dr. E. J. Goodwin, St. Louis, Secretary of the State Medical Association.

After the reading of the minutes, which were approved, Dr. Goodwin made a talk instructing all members as to the necessary procedure for forming a Tri-County Society, also telling of the good that can be accomplished by such a combined society.

Dr. Barnhart was elected temporary chairman and Dr. Dixon as temporary secretary, to preside over that part of the meeting pertaining to the formation of the Tri-County Society.

After the completion of the business performed by the temporary body, the routine business was again taken up by the permanent organization, after which the body adjourned to Todd's Cafe where lunch was served.

The next regular meeting will be held in the Chamber of Commerce Rooms, Moberly, Dec. 14, 1926, at 8:00 p. m., at which time there will be an election of new officers.

M. R. NOLAND, M.D., President.

F. L. MCCORMICK, M.D., Secretary.

MEETING OF THE 24TH, 26TH AND 27TH COUNCILOR DISTRICTS

The first meeting of the 27th Councilor District, jointly with the 24th and 26th Districts, was held at Willow Springs, November 19. The meeting was called to order in the parlors of the Horton Hotel. Dr. D. D. Cox, Pomona, was chosen chairman and Dr. A. H. Thornburgh, West Plains, was chosen secretary. The following interesting and instructive program was carried out:

"The Goitre Problem" was ably presented in an address by Dr. H. J. McKenna, Kansas City, which brought out a general discussion by the men present.

"The Treatment of Syphilis" was discussed at length in an address by Dr. Paul F. Stookey, Kansas City. The high points in the treatment of this disease were brought out by Dr. Stookey and by the discussion which followed.

"Bronchiectasis" was the subject of an address by Dr. Walter A. German, Kansas City. In his address, Dr. German called attention to the prominent

symptoms of this disease and emphasized the points of differential diagnosis between this and other lung diseases, especially pulmonary tuberculosis. A general round table discussion of the subject followed by which the members present were greatly benefited.

The visiting doctors were entertained at the Horton Hotel at a six o'clock banquet given by the Willow Springs Chamber of Commerce, at which Dr. J. C. B. Davis, Willow Springs, presided as toastmaster. Mr. Ben Dryman, President of the Chamber of Commerce, delivered the address of welcome in his usual happy manner. The response to the address of welcome was made by Dr. P. D. Gum, West Plains, the medical Cicero of the Ozarks.

A public health meeting was held in the auditorium of the public school building at 7:30 p. m., which was very well attended. At this meeting Dr. A. H. Thornburgh gave a short address on "Cancer," Dr. H. J. McKenna spoke on "Timeful Surgery," Dr. Paul F. Stookey, "Preventive Medicine," and Dr. Walter A. German, "Periodic Health Examination."

This District meeting was a pronounced success in point of interest, instruction and good fellowship.

A. H. THORNBURGH, M.D., Secretary.

ST. LOUIS MEDICAL SOCIETY

Meeting of September 28, 1926

The meeting was called to order at 8:30 p. m. by the first vice president, Dr. C. A. Vosburgh. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Giardiasis in Children," with a report of three cases by Dr. John Zahorsky.

Discussion by Dr. W. McKim Marriott; Dr. Zahorsky closing.

"A Practical Method of Identification of the Gonococcus," by Dr. R. B. H. Gradwohl.

Discussion by Drs. John R. Vaughan, John Zahorsky; Dr. Gradwohl closing.

An announcement was made that on account of the annual visit of the Veiled Prophet to St. Louis on Tuesday evening, October 5, there would be no meeting of the Society on that date.

Attendance 86.

Meeting of October 12

The meeting was called to order at 8:35 p. m. by the secretary in the absence of the president and vice president. Dr. John C. Morfit was asked to take the chair. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Pyelonephritis," by John R. Caulk.

Discussion by Drs. Bransford Lewis, H. J. Scherck; Dr. Caulk closing.

"Discussion of the Nature of Epilepsy," by Dr. Leland B. Alford.

Discussion by Drs. F. M. Barnes, M. W. Hoge.

Attendance 118.

Meeting of October 19

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

The scientific program was arranged by the St. Louis Radiological Club and consisted of the following:

"The Value of Pyelography in Kidney Diagnosis," by Dr. Paul Titterton.

Discussion by Drs. Neil Moore, E. H. Kessler; Dr. Titterton closing.

"Remarks on X-ray Findings in Paget's Disease," by Dr. Sherwood Moore.

Discussion by Drs. Oscar Zink, M. L. Klinefelter; Dr. Moore closing.

"Observations on the Routine X-ray Examination of the Gastrointestinal Tract," by Dr. Edwin C. Ernst.

Discussion by Dr. E. H. Kessler; Dr. Ernst closing.

"Massive Collapse of the Lung," by Dr. L. R. Sante.

Discussion by Dr. T. H. Hanser; Dr. Sante closing.

Dr. Ravold announced that the meeting for nomination of officers for the year 1927 would be held on Friday, November 5, and urged all members to attend.

Attendance 118.

Meeting of October 26

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

The program for the evening was devoted to The Workmen's Compensation Act for Missouri and consisted of the following:

"Legislative History," by Hon. William R. Schneider, Member of the Legislature from St. Louis.

"Legal Aspects," by Hon. Alroy S. Phillips, Federal Prohibition Administrator.

"Medical Service Under the Workmen's Compensation Act," by Dr. L. G. Harney, East St. Louis, Illinois.

Discussion by Drs. Hillel Unterberg, Norvelle Wallace Sharpe, L. G. Harney and Hon. Wm. R. Schneider.

It was moved that the Society endorse Proposition One (Workmen's Compensation Act) and that the press be notified of the Society's stand. Seconded and carried.

Attendance 89.

Meeting of November 2

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

The scientific program consisted of the following:

"A Report of 150 Cases of Laryngeal Diphtheria," by Dr. Curtis H. Lohr.

Discussion by Drs. T. Wistar White, T. C. Hempelmann, R. J. Payne, Thomas G. Hall, M. J. Lippe, Amand Ravold; Dr. Lohr closing.

"Malta Fever," by Dr. George W. Wilson.

Discussion by Drs. Howard H. Bell, Amand Ravold; Dr. Wilson closing.

Attendance 59.

Meeting of November 9

The meeting was called to order at 8:30 p. m. by the president, Dr. Amand Ravold.

Dr. G. H. Garrison, of the Isolation Hospital, presented a case of hyperkeratosis.

Discussion by Drs. Joseph Grindon, James Moores Ball, Henrietta A. S. Borck; Dr. Garrison closing.

Dr. Neil S. Moore presented a case of an unusually large prostate.

The scientific program for the evening was as follows:

"My First Fifty Operations for Breast Cancer With Remarks on the Results," with lantern slide demonstration, by Dr. Wm. T. Coughlin.

Discussion by Drs. Henrietta A. S. Borck, Joseph Grindon, M. Henry Dalton, Louis Rassieur, Charles F. Sherwin, John McH. Dean, Francis Reder, Wm.

E. Leighton, Willis Young, E. C. Ernst; Dr. Coughlin closing.

Because of the lateness of the hour Dr. Kirchner's paper was postponed.

Attendance 110.

E. C. FUNSCH, M.D., Secretary.

WOMEN'S AUXILIARY

OFFICERS 1925-1926

President, Mrs. A. B. McGlothlan, St. Joseph.

President-Elect, Mrs. W. M. Bickford, Marshall.

Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

1st Vice President, Mrs. A. W. McAlester, Kansas City.

2nd Vice President, Mrs. Archer O'Reilly, St. Louis.

3rd Vice President, Mrs. M. P. Neal, Columbia.

4th Vice President, Mrs. Wm. Spaulding, Poplar Bluff.

Corresponding Secretary, Mrs. H. S. Conrad, St. Joseph.

Recording Secretary, Mrs. M. A. Hanna, Kansas City.

Treasurer, Mrs. C. T. Ryland, Lexington.

Directors: Mrs. Guy L. Noyes, Columbia; Mrs. Leland Boogher, St. Louis; Mrs. Geo. H. Hoxie, Kansas City; Mrs. Frank Hinchey, St. Louis; Mrs. Walter Baumgarten, St. Louis; Mrs. M. P. Overholser, Harrisonville; Mrs. H. F. Parker, Warrensburg; Mrs. R. W. Berrey, Mexico; Mrs. J. G. Montgomery, Kansas City; Mrs. W. F. O'Malley, Webster Groves.

GENTRY COUNTY AUXILIARY

The Gentry County Medical Association and the Women's Auxiliary to the Medical Association were delightfully entertained at the home of Dr. and Mrs. C. H. McCaslin in Stanberry the evening of October 7th. About twenty-five were present and important subjects were discussed. Our guests were Mr. and Mrs. E. C. Duncan. Mr. Duncan, our county superintendent of schools, gave us a good talk and made helpful suggestions. He mentioned plans of mutual cooperation.

One of the objects of the Auxiliary is to increase the circulation of the splendid health magazine "Hygeia." The Auxiliary is offering attractive introductory prices. This magazine should be in every home. Won't you subscribe? Telephone Mrs. J. T. Bickel, of Albany, county chairman of Hygeia; Mrs. S. E. Simpson, Stanberry, sub-chairman of Hygeia; Mrs. Helen Erwin, King City, sub-chairman of Hygeia. We have planned to put this magazine in the hands of the public school teachers of our county. One junior college in California plans to use Hygeia as a text book.

The two associations also have adopted the "Seymour Plan for Disease Prevention." Dr. M. M. Seymour, deputy minister of public health of Saskatchewan, and who was also the president of a conference of state and provincial authorities of North America, suggested a plan for "drives" against three diseases. This plan was adopted by the National Health Council. The scheme is this: For September and October we will put forth all efforts toward educating the public concerning the nature and prevention of diphtheria. November and December the same with smallpox. January and February in typhoid.

The Metropolitan Life Insurance Company is sending us some attractive pamphlets which may be had for the asking.

In diphtheria they bring out the risk of your child by postponing of the toxin antitoxin treatment which is used for preventing diphtheria before it appears. The second pamphlet "Vaccination Protects You Against Smallpox," another safeguard. The third pamphlet is "The Scrum to Prevent Typhoid. We are hoping to have some educational films in these subjects. Any club or organization desiring some of this literature please feel free to call. Let our county join the nation in trying to stamp out these preventable diseases.

MRS. W. T. MARTIN, President.

HOLT COUNTY AUXILIARY

A meeting of the doctors' wives of Holt County was held at the pleasant home of Dr. and Mrs. F. E. Hogan, Mound City, at 2:00 o'clock Friday afternoon, November 5.

A Women's Auxiliary to the Holt County Medical Society was organized with Mrs. F. E. Hogan as president; Mrs. Ira Williams, Maitland, vice president; Mrs. D. C. Perry, Mound City, secretary-treasurer.

Mrs. R. R. Miller, Mound City, was appointed chairman of education to plan with the county nurse the health education work to be promoted by the Auxiliary. Mrs. J. E. Ottman, Craig, was appointed chairman for the circulation of Hygeia. An effort will be made by this new Auxiliary to place a subscription to Hygeia in each rural school of the county.

Visitors present were, Mrs. J. F. Owens, Mrs. Caryl Potter, Mrs. H. S. Conrad and Mrs. A. B. McGlothlan, all of St. Joseph.

Mrs. McGlothlan explained the aims and plans of the Women's Auxiliary of the State Medical Society, emphasizing the value of social meetings to promote acquaintanceship among doctors' families and of cooperating with the State Board of Health and other existing health agencies working under its supervision to support and extend the board's plans for the respective counties. She stated that the policy of the Women's Auxiliary is to promote no project that is not first approved by the medical society to which the women's organization is auxiliary.

Miss Strobel, the county nurse, gave a resume of the work being done by the Health Education Center of Holt County.

A delightful vocal solo was given by Mrs. Hewitt, after which refreshments were served by the hostess.

ST. LOUIS MEDICAL SOCIETY AUXILIARY

The Women's Auxiliary to the Saint Louis Medical Society had their first meeting of the fall on Wednesday, November 3, in the form of a tea in the new building of the St. Louis Medical Society. An opportunity was given all the members and all eligible to membership to inspect the beautiful and spacious quarters for the library and the society's activities.

The crowd of women that thronged the building bespoke a live interest. All members of the Auxiliary were hostesses. The following formed a special committee for the afternoon: Mrs. H. S. McKay, Mrs. R. J. Payne, Mrs. Arthur Alden, Mrs. Ralph Thompson, Mrs. W. S. Clapper, Mrs. John Zahorsky, Mrs. Carl Dudley, Mrs. Carroll Smith and Mrs. John C. Morfit.

The following who had been most generous in

their contributions to the building and special memorial features were invited as guests of honor: Mrs. Newton R. Wilson, Mrs. John B. Shapleigh, Miss Margaret Shapleigh, Mrs. J. Will Boyd, Mrs. F. E. Woodruff, Mrs. J. H. Duncan, Mrs. J. F. Shoemaker, Mrs. George F. Steedman, Mrs. S. J. King, Misses Eunice and Alice Smith, Mrs. Lawrence A. Browning, Mrs. Emery Williams.

The president, Mrs. Henry McClure Young, welcomed the guests in a brief talk and called on the president of the St. Louis Medical Society, Dr. Amand Ravold, who gave an interesting account of conditions and events leading to the accomplishment of this new home for the society. He commented on the factions and hatreds that had existed in past generations of medical men, and added that the cordial spirit and good will that characterized this large gathering of doctors' wives would indeed astonish them.

Refreshments were served from a large table charmingly decorated in fall colors.

The Auxiliary will sponsor a bridge party in the near future for the benefit of the fund which has been started to purchase some definite gift in the furnishing of the new building.

The executive board meets the third Friday each month at the Medical Society building. At the October meeting the treasurer reported the pledge of \$200 had been paid to Dr. Curtis, State Director of Physical Education in the public schools.

Mrs. T. C. Hemplemann, chairman of Hygeia, reported that she had installed at the booth of the State Board of Health at the Greater St. Louis Exposition the display of Hygeia posters and literature sent from headquarters in Chicago.

The officers for 1926-1927 follow: President, Mrs. H. McClure Young; vice presidents, Mrs. J. J. Singer, Mrs. Samuel Bassett, Mrs. Chas. W. Thierry, Mrs. Olney A. Ambrose; recording secretary, Mrs. Frank L. Davis; corresponding secretary, Mrs. Warren Elmer; treasurer, Mrs. J. Leland Boogher; directors, Mrs. G. N. Seidlitz, Mrs. W. W. Graves, Mrs. Frank Hinchey, Mrs. T. C. Hemplemann, Mrs. Irving Boehmer, Mrs. J. J. Burdick; representatives of health committee community council, Mrs. W. E. Fischel, Mrs. Willard Bartlett; entertainment committee, Mrs. Samuel Bassett, chairman; Mrs. T. C. Hemplemann, Mrs. N. R. Donnell, Mrs. Hudson Talbot, Mrs. Robert E. Schlueter, Mrs. Frank L. Davis, Mrs. Chas. W. Thierry.

BOOK REVIEWS

THE BACTERIOPHAGE AND ITS BEHAVIOR. By F. D'Herelle, M.D. Director of Laboratories at Alexandria, Egypt. Translated by George H. Smith, Ph.D. Associate Professor of Bacteriology and Immunology at the School of Medicine, Yale University. The Williams & Wilkins Company, Baltimore, Md. Price \$8.00.

The knowledge of most of us (including many so called laboratory men) regarding the bacteriophage is confined to our reading of "Arrowsmith," by Sinclair Lewis. In this interesting work of fiction the author, coached by an expert bacteriologist, Paul de Kruif, has interwoven the story of the bacteriophage with the career of his hero. That Sinclair Lewis is easier reading than Dr. D'Herelle goes without saying. The six hundred pages of the Bacteriophage is solid meat. "In this volume I offer physiological proof of the living nature of the bacteriophage," says D'Herelle and in addition he gives a review of

all work done in the bacteriophage by all workers in the subject.

Outside of the scientific object of the work there is the question of the practical application of the use of the bacteriophage in immunization against certain diseases and its use as a specific therapeutic agent in certain infections.

The author concludes that for certain diseases—bacillary dysentery, staphylococcus infections, colon bacillus infections—phagotherapy is becoming an established procedure and many authors consider it specific. He hopes this will presently be true for plague. But warning is strongly urged against the exploitation of these methods by commercial houses and the author states that at present the preparation of suspensions of the bacteriophage designed for therapeutic use should be in the hands of the scientific institutions.

R. L. T.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

IYVOL.—A solution in olive oil of an irritant or vesicant oil extracted from the fresh leaves of poison ivy. Ivyol is used to relieve the symptoms of the dermatitis produced through contact with poison ivy. It is marketed in "Hypo Units," collapsible syringe containers, each containing 0.7 cc. of ivyol. H. K. Mulford Co., Philadelphia.

PITUITARY EXTRACT—Lederle 20 Units.—A slightly acid aqueous solution containing the water-soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle, free from preservative. It is standardized to have twice the strength of solution of pituitary—U. S. P. X. For a discussion of action, uses and dosage, see New and Nonofficial Remedies, 1926, pp. 281 and 283. The product is supplied in 1 cc. ampules. Lederle Antitoxin Laboratories, New York. (*Jour. A. M. A.*, Aug. 14, 1926, p. 491.)

ANTERIOR PITUITARY.—L. & F. Desiccated.—The anterior lobe of the pituitary gland of cattle, dried and powdered. For a discussion of the actions and uses, see Pituitary Gland, New and Nonofficial Remedies, 1926, p. 281. The product is also supplied in 1 grain tablets. Lehn & Fink, Inc., New York.

ERYSIPELAS STREPTOCOCCUS ANTITOXIN.—An antitoxic serum prepared by immunizing animals against the toxin of the hemolytic streptococci of erysipelas. Reports have been published which indicate that the injection of erysipelas streptococcus antitoxin favorably affects the course of erysipelas.

PITUITARY SUBSTANCE.—L. & F. Desiccated.—The pituitary gland of cattle, including the infundibulum and the anterior and posterior lobes, dried and powdered. For a discussion of the actions and uses, see Pituitary Gland, New and Nonofficial Remedies, 1926, p. 281. The product is also supplied in 1½ grain tablets. Lehn & Fink, Inc., New York.

OSCODAL.—A preparation of the nonsaponifiable fraction of cod liver oil, containing the antiphthalmic and antirachitic fat soluble vitamins. It has 500 times the antiphthalmic potency of cod liver oil when assayed by the method of the U. S. P. for cod liver oil, and its antirachitic potency is such that 0.02 Gm. per day will initiate recalcification in the leg bones of young albino rats. Oscodal possesses properties similar to those of cod liver oil so far as these depend on the fat soluble vitamin content of the latter. Oscodal is supplied in tablets containing 0.02 Gm. H. A. Metz Laboratories, Inc., New York.

ERYSIPELAS STREPTOCOCCUS ANTITOXIN—Mulford.—This antitoxic serum is obtained by injecting horses intradermally with strains of hemolytic streptococci isolated by H. Amoss from human cases of erysipelas lesions, bleeding the horses and when test bleedings show the serum to have reached the desired potency, separating the serum, sterilizing and preserving it. The product is marketed in 100 cc. vials. H. K. Mulford Co., Philadelphia.

Propaganda for Reform

POSTERIOR PITUITARY—L. & F. Desiccated.—The posterior lobe of the pituitary gland of cattle, dried and powdered. For a discussion of the actions and uses, see Pituitary Gland, New and Nonofficial Remedies, 1926, p. 281. The product is also marketed in the form of 1/10 grain tablets. Lehn & Fink, Inc., New York. (*Jour. A. M. A.*, Aug. 28, 1926, p. 671.)

CRYSTALLINE TUBERCULIN.—The isolation of a crystalline protein with tuberculin activity has been reported. The crystallized product elicits the characteristic skin reaction in tuberculous subjects. Chemically, it is shown that wherever the activity is lost, following enzyme treatment, there occurs also a corresponding reduction in whole protein, with an increase in proteose and residual nitrogen. (*Jour. A. M. A.*, Aug. 7, 1926, p. 417.)

SILVER PROTEIN PREPARATIONS.—At the request of the Council on Pharmacy and Chemistry, the A. M. A. Chemical Laboratory examined the silver protein preparations that had been found acceptable for New and Nonofficial Remedies in order to determine whether or not they complied with the standards of the U. S. Pharmacopeia X. The Laboratory reports that all of the specimens of the silver protein preparations both mild (Argyrol type) and strong (Protargol type) described in New and Nonofficial Remedies were found to comply with the new U. S. Pharmacopeia standards for these preparations. (*Jour. A. M. A.*, Aug. 7, 1926, p. 430.)

JOHN HOWLAND.—The Council on Pharmacy and Chemistry publishes an appreciation of John Howland. By the death of John Howland, the Council has sustained a great loss; for he was a member whose devoted services were much valued and whose contributions to the scientific progress of medicine have been outstanding. The members of the Council mourn the loss of their colleague, and point to his services as an inspiration for all. (*Jour. A. M. A.*, Aug. 14, 1926, p. 491.)

NAFTALAN NOT ACCEPTABLE FOR N. N. R.—The Council on Pharmacy and Chemistry reports that Naftalan, according to the Ft. Dearborn Drug & Chemical Co., is manufactured by E. Stiewe, Magdeburg, Germany, and is "a preparation of Russian mineral oils containing about 4 per cent. of soap, in the form of an ointment." The claims made for the preparation are closely similar to those which were formerly made in the exploitation of Ichthylol for various skin diseases. The Council found Naftalan unacceptable for New and Nonofficial Remedies because the information in regard to its composition is unsatisfactory and indefinite and because the therapeutic claims advanced for it are unwarranted. (*Jour. A. M. A.*, Aug. 14, 1926, p. 509.)

RAY AND LIGHT THERAPY IN OTOLARYNGOLOGY.—Violet ray and quartz light therapy have not been scientifically established as of great value for conditions of the nose and throat, as compared with the generally accepted medical treatment. With every new type of treatment, especially along the line of

mechanical or physiotherapy, some investigators become overenthusiastic and report glowing results. As time elapses, it is found that most of these measures give some relief to a small percentage of patients but fail entirely in many others. (*Jour. A. M. A.*, Aug. 21, 1926, p. 607.)

PREVENTIVE INOCULATION AGAINST RABIES.—In the use of antirabic inoculation, there is no especial advantage in the use of the treatment requiring a considerable number of doses over that in which a smaller number are employed. Within recent years the killed virus has to a very considerable extent replaced the attenuated virus. A number of modifications of the Pasteur treatment are licensed by the Treasury Department and all are considered to be safe and effective. The duration of immunity in man after a series of antirabic injections is unknown, but it is generally advised that an exposure to rabies more than six months after a course of treatment should be followed by a new course of the prophylactic. (*Jour. A. M. A.*, Aug. 21, 1926, p. 607.)

BESFAL.—Besfal is marketed under absurd and ludicrous claims. The claimed chemical composition of the product and the product itself both may be described as "crude." (*Jour. A. M. A.*, Aug. 21, 1926, p. 608.)

THE SAN-GRI-NA AND SILPH CHEWING GUM FRAUDS.—"San-Gri-Na" was put out by the imposingly named "Scientific Research Laboratories" and "Madame Elaine." The laboratories were non-existent and so was "Madame Elaine." "Silph Chewing Gum" was sold by the "Silph Medical Company" and "Madame Claire." There was nothing medical about the company; there was no "Madame Claire." The San-Gri-Na fraud was analyzed in the A. M. A. Chemical Laboratory in 1924 and an article published on the subject in *The Journal* in November 22 of that year. One of the chief advertising assets of the San-Gri-Na fraud was a testimonial by Dr. J. J. Rudolph, 636 Garden Street, Hoboken, New Jersey. He is the same J. J. Rudolph, apparently, that exploited a quack cure for malaria a few years ago. The facts, as brought out by government investigation show that both San-Gri-Na and Silph Chewing Gum are enterprises of one W. E. Learned. Both San-Gri-Na and Silph Chewing Gum contained pokeroot, leptandrin, phenolphthalein and desiccated thyroid, and both, according to the government report, were made by the H. K. Mulford Company, of Philadelphia. In addition to these two obesity cure fakes, Learned had two subsidiary humbugs in the same line: "Dr. Foul's Reducing Soap," which the Federal chemists reported was an artificially colored soap made largely from palm oil or a similar fat, and containing a minute amount of iodine in the form of water soluble iodides, and "Sangra Salts," which was Epsom salt colored. (*Jour. A. M. A.*, Aug. 28, 1926, p. 688.)

SPÄHLINGER TREATMENT FOR TUBERCULOSIS.—From time to time M. Spählinger has given out enthusiastic reports from his Geneva Hospital. Because of the favorable newspaper comment, more particularly in England, concerning this product a report was made on it by the Science Committee of the British Medical Association. In the statement of this committee, published last spring, the history of the preparation was summarized and the committee strongly emphasized it cannot endorse "this or any new method until after a full and independent test." The committee concluded that the remedy is secret and that the exact methods of preparation have never been fully published; and further, that no investigations carried out under strict experimental conditions which afford direct and convincing evidence of curative action have been published. (*Jour. A. M. A.*, Aug. 28, 1926, p. 693.)

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